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ABSTRACT

This book helps teachers of Native American students to facilitate learning in school through awareness of cultural and values differences between Native Americans and the mainstream culture. Most of the specific cultural information presented comes from the Navajo and Hopi Reservations in northeastern Arizona, but the associated ideas, methodologies, and activities may be used as guidelines by teachers elsewhere to develop their own strategies. Chapters cover: (1) the discouraging history and current status of Native American education; (2) traditional Native views on the acquisition and value of knowledge; (3) comparison of school and Native American values; (4) high risk of failure and dropping out among Native American students; (5) culture conflict in schools; (6) approaching cultural differences as strengths rather than deficiencies, and adapting curriculum and practices accordingly; (7) learning style differences; (8) holistic learning; (9) motivation and discipline; (10) comparison of behavioral and holistic approaches to education; (11) developing and using a school philosophy; (12) curriculum development; (13) assessment problems; (14) teaching style and the teacher's role; (15) parent and community involvement; and (16) ideas to increase instructional effectiveness. Contains 152 references. (SV)

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Nurturing Learning
in
Native American Students

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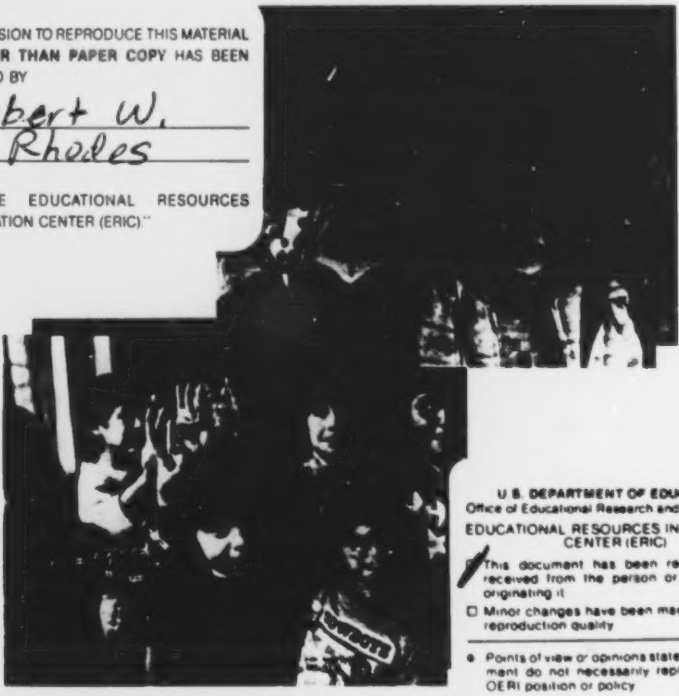

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Robert W. Rhodes

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Nurturing Learning in Native American Students

Robert W. Rhodes

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This book has developed over a period of more than twenty years of working with Native Americans as teacher and as student. Several people have served as wonderful role models for me during those years and assisted greatly in the development of my educational philosophy. Charles Loloma and Vernon Masayesva were both tremendously influential. A great deal of educational wisdom came from watching and listening to Dean Jackson, Marshall Jenkins, Joe Martin, Brian Honyouti, David John, David Woods and Joe Ben Jr. Lovena Ohl added great insight about professional integrity and caring for people. Numerous other teachers, administrators and students gave me an education, a little bit at a time. Words of wisdom, observations, conections, and discoveries have come in unexpected ways, from unexpected sources and at unexpected times. The shepherd, the farmer, the sand painter, the doll carver, the jeweler, all have their tale. As they are in tune with their environment and their culture, they are models and teachers. Some are relatives, some are friends, and others I met for seemingly no reason at all. All were educators.

I am greatly indebted to Verma Nequatewa who tolerated me constantly turning the conversation at social gatherings to educational matters. She also believes in me enough to let me make my own educational mistakes, knowing that is what I must do in my learning style. Her patience and her wisdom have given me strength. I also sincerely appreciate the assistance of Debbie Braff, Tommie Canyon, Anita DeBoer, Ted Fadler, Charlie Frazier, Amanda Hyatt, Wayne Hyatt, Diane Rhodes, Rosanda Suetopka-Thayer and particularly Dan McLaughlin for their suggestions and encouragement during the writing process. Finally, sincere thanks has to go to all those who thought they were my students when actually they were my teachers.

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The photographs by Owen Seumptewa throughout the book add an element which would indeed take thousands of words. His artistry is greatly appreciated.

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Preface

One of the main premises of this book is that learning is a much more important activity in schools than is teaching. Teachers spend a great deal of time and energy in school and in talking with each other, learning how to "teach." In reality, though, if learning you expected doesn't take place, it doesn't matter, teaching didn't happen. Therefore, throughout this book, the focus will be on learning activities rather than on teaching activities. This shifts the focus from the teacher to the student, who, after all, is the most important element in schools. Throughout the book, though, the term "teacher" is used. This is to make the reading process smoother, since you know what "teacher" means, but would hesitate each time at "facilitator." Teacher: One who facilitates learning.

Learning, of course, takes place in children all the time, in school and outside of school. Much learning is shaped by factors which we facilitators cannot control. The school is a part of the learning environment for children, and this book will emphasize the role of the students in that environment and that part of learning which the teacher/facilitator can assist.

With the emphasis on students and on learning by students, the function of the teacher changes somewhat. In traditional settings, we teachers learned to be a "source of all information." In this new situation, we become a "learning facilitator". The requirements that we stay ahead of the students, that we always have the answer or at least know where to find the answer, and that we be able to correct student errors will no longer be the guiding principles of the classroom. The new "teacher" is actually a facilitator, a coach. Imagine, if you will, a high school or college track coach, well over 40 years old and with a fairly well developed pot belly, coaching a world class sprinter in the 100 yard dash. The coach could not possibly demonstrate running such a race anywhere near to world record time. He may not even be able to make it to the finish line. Nonetheless, he can offer suggestions, praise and comments which the young athlete can then use to develop competitive techniques. In a like manner, we, the new style teacher, will encourage learning, foster development, encourage and praise students, offer suggestions, and observe (even guide) student development.

"At last", we might say, " state guidelines are out the window!" Not true! In the same way that the coach above needs to know what times make a record and what times are needed even to qualify for the competition, we need to know what competencies are expected. We can then make sure students meet those competencies, not through a canned curriculum, but through making sure students have the needed conceptual frameworks and abilities. Whether we call them state guidelines, minimal objectives, minimal competencies, or by some other name, teachers and students together need to have some goals for the activity of schooling. With understanding by both teacher and student of the competencies needed and being developed, the activity of schooling can be fun and rewarding. Without that understanding and awareness, drudgery and boredom set in.

Another assumption of this book is that there is a shared responsibility for the learning which is usually expected to happen in schools. The school setting and the teacher have a role, but there is also a responsibility of the parent and of the child. Each is equally important to assure that this learning takes place. Those family situations which depend solely on the school to "teach" their child are bound for failure. Schools which take sole responsibility for student learning also cannot succeed. Children learn constantly and everywhere. The student is a part of a community. All elements of that community — the

family, the school, and the student — are needed to assist learning.

With the focus on learning, rather than on teaching, the job of the school administrator changes also. If the emphasis is on teaching, the administrator must control, organize, regulate, and monitor both the teaching activity and the teacher. When the emphasis shifts to learning, the administrator becomes a facilitator of the learning activity through support of those directly fostering learning. The administrator can observe learning, offer ideas and suggestions, provide materials or opportunities, and otherwise support and encourage classroom activities. His/her role as a policeman decreases and his/her role as a support person grows. The focus changes from a mostly negative disciplinarian of students and a keeper of the funds to a real source of creative educational ideas who assists in the learning process.

This book does not pretend to give a "cookbook" approach to Native American education. There are so many differences between tribes and their cultures, and even for different locations within the same tribe, that what works for one may or may not work for another. Rather, this book will try to present and develop some ideas and possibilities which may prove helpful to us as teachers (learning facilitators), but will require modification and personalization to meet specific situations. The purpose is not to present a way of doing Native American education which is guaranteed to work. I am not sure anyone could do that, either generally or specifically. Rather, this book will present some ideas, philosophies, methodologies, and a few specific activities which have worked with specific situations on reservations in the Southwest. These are presented as guides from which individual teachers and administrators can develop ideas to try.

There are many constructs for evaluating and restructuring education. Some of these are discussed briefly in the chapters which follow. However, the approach which my 23 years of work on the Navajo and Hopi Reservations gives me the most hope for success is based on awareness of cultural and values differences. I believe this to be most accessible to teachers, parents and administrators, with a large body of literature to back it up. The other schools of thought do have aspects which will be useful for schools. As the educational process develops and improves, some of these will be adopted as well. The framework for change, though, will be based on increasing multicultural awareness.

After presenting the discouraging historical development of Native American education, I present the cultural/values ideas which are essential to understand the approach of the rest of the book. I then present the elements of student learning, how, why, what, and from whom, ending with a section on what has worked for successful teachers in the field.

The audience for this book includes teachers trying to be more successful with Native American students. For them, I have tried to keep the flow going as much as possible in order to present and develop ideas which will be pertinent to the classroom setting. As teachers begin to their Native American students, they will need additional information, additional resources. I have tried to put in enough references and citations into the text to give a starting place for research, while trying to be careful to not disrupt the reader's train of thought. It is important that those working with Native American students become aware of the literature, so please take time, when you can, to begin following up areas of interest.

Most of the specific information presented in this book comes from the Navajo and Hopi Reservations in Northeastern Arizona. The reader needs to realize that what is appropriate on the Navajo and Hopi Reservations may be appropriate for other tribes and for application off reservations. It is presented as food for thought. However, each of us, as teachers of Native American students, has to take a professional, even a research, approach, to facilitating the learning of the Native American students in the classroom. If it works, if you get positive results, if learning happens, use it. You will still constantly analyze your efforts to see if it still fits and if there may be a better way. If those things don't happen, try something else.

You will find that many of the ideas will work well with non-Native Americans in classrooms throughout the country. It is interesting that most of what is developed for Native American students can be used for non-Natives, but only a part of what is developed for the mainstream culture works for Native Americans. It appears that the more wholistic[1] approaches which do work well for Native Americans also work well elsewhere. However, the behavioral approaches do not work as well for Native Americans, particularly on reservations. The research in Chapter 7 implies that what works for the 70% of wholistic learners on reservations will likely work for the 30% in off-reservation schools.

Many of the chapters presented in this book were originally developed as separate ideas and separate papers over a period of nearly 10 years, some of which were published and others were not. Therefore there is some repetition of ideas and of examples. These are left intentionally with the thought that being a little redundant serves to reinforce concepts. However, you may notice that writing styles vary and one presentation of an idea may be clearer than another. Since you will probably have a different mindset at different times, the redundancy may serve a purpose.

Finally, the learning/teaching process should be fun. The same goes for learning how to nurture learning. In your use of this book, it will likely be more fun for you to follow your interests. Start where you are most interested in the book and proceed where it takes you. The order of reading makes little difference.

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[1] Throughout this book I will use this spelling, rather than the preferred spelling, "holistic." I like the implication of a connection to a "whole" which this spelling gives.

Chapter 1

Historical/Current Native American Education - Is It Working?

The dismal history of Native American education has been stated over and over. Szasz (1988) tells of Native American education in the colonial era. Even from the earliest times, there were problems in the perception of schooling for Native Americans. McLuhan (1971) quotes the Chiefs of the Indians of the Six Nations at Lancaster, Pennsylvania in response to an offer from the commissioners of Maryland and Virginia to educate twelve young Native American men at William and Mary college, June 17, 1744 as follows:

> We know that you esteem highly the kind of learning taught in those Colleges, and that the Maintenance of our young Men while with you, would be very expensive to you. We are convinced, that you mean to do us Good by your Proposal; and we thank you heartily. But you, who are wise, must know that different nations have different Conceptions of things and you will therefore not take it amiss, if our Ideas of this kind of Education happen not to be the same as yours. We have had some Experience of it.
>
> Several of our young People were formally brought up at the Colleges of the Northern Provinces: they were instructed in all your Sciences; but, when they came back to us, they were bad Runners; ignorant of every means of living in the woods...neither fit for Hunters, Warriors, nor Counselors, they were totally good for nothing.
>
> We are, however, not the less obliged by your kind offer, though we decline accepting it; and, to show our grateful Sense of it, if the Gentlemen of Virginia will send us a Dozen of their Sons, we will take Care of their Educa-

> tion, instruct them in all we know, and make Men of them.

Sando (1992) talks about Native American education provided by the Presbyterian Church in Southwestern Pueblos beginning as early as 1873, and by the Bureau of Indian Affairs by 1881. Adams (1988) shows very specifically how the schooling of Native Americans at the end of the 19th century was designed to destroy their culture and to assimilate them into the dominant culture. He outlines a concerted effort to impose 1) the Protestant Ideology, 2) White superiority, 3) eradication of Native languages, 4) materialistic ideals, 5) emphasis on the nuclear rather than the extended family, 6) reduction of Native American owned lands. Many of the techniques, materials, and processes he outlines are still used in Native American education today.

The Meriam Report (1928) told of failures in Native American education in the 1920's. The Kennedy Report(1969) confirmed the same problems in the middle of this century. Study after study has indicated that Native American dropout rates greatly exceed national dropout rates. Chavers (1991) printed an annotated bibliography of 31 dropout studies, each of which confirms this. Scores on standardized tests are well below national norms.

On the many reservations, there are public, parochial, and private schools, similar to the situation off the reservations. Additionally, there are schools run by the Bureau of Indian Affairs (BIA), and schools funded through the BIA and other government agencies, but run by the tribe or a local Native American school board (contract/grant schools). On some reservations in the Southwest, there are schools in close proximity with five different governance systems, each with its own agenda.

Students often transfer from one school to another, depending on the politics of the moment, the perceived quality of specific teachers, special programs, family situations, road conditions, discipline problems, or sometimes just whimsy.

Generally, the curriculum and classroom methodology of schools on reservations approximates that of schools off the reservations. Most use state textbook lists and methodologies promoted by textbook manufacturers, program developers, colleges and universities. That is, there is little concern for any differences which might be necessary either in materials or in approach for Native American students, particularly those living on reservations. Public and BIA schools are required to use only certified teachers, so the same teacher qualifications apply for these teachers as for those elsewhere in their states. Parochial, private, and contract/grant schools are allowed to set their own teacher preparation criteria, though most require state certification as a rule.

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The teachers on and off the reservation are roughly equivalent, and the curriculum materials and methodologies are roughly comparable, so we would expect the performance of Native American students on reservation to be roughly comparable to Native American and non-Native American students off reservation. This is definitely not the case, as will be shown in the chapter on testing. Off-reservation non-Native American students score much higher than any Native American group. Native Americans living off-reservation score significantly higher than do those living on reservations.

In trying to respond to the factors brought out by the Meriam Report, the Kennedy Report, and the plethora of other reports which have appeared over the years, schools and school districts have adopted Chapter I remedial programs, Title 5 programs, Title 7 Bilingual programs, Special Education remedial and gifted programs, and many more to try to bring their students closer to national norms. Management systems such as Essential Elements of Instruction, Outcomes Based Education, Effective Schools, Total Quality Management and others have been tried, each of which imposes a system from outside onto minority students and teachers. Each of these programs brings additional state approved materials in relatively standard methodologies to students to try to "teach" them better. In looking at the situation, the comments from the preface of this book may be pertinent. *The assumption has been that the students have not responded adequately or appropriately to the standard curriculum and methodologies, so the school should do more of what has already failed..., but do it better.*

Butterfield (1983) calls attention to the difference in values between the school system and the Native community. She indicates that the schooling system is sidestepping one of its cardinal principles by not meeting students where they are, but rather expecting them to learn in a system for which they have no foundation. Kleinfeld (1983) carries this idea a step farther by indicating that "some cultural groups in some circumstances decide that they do not want to acquire the attributes of the majority culture." (p. 286) This is a most interesting concept, but we will certainly want to approach it carefully.

An alternative would be to look at situations which have worked. Publications of successes in Native American education are difficult to find. There are a few small articles of individual successes in some issues of the Journal of Navajo Education or the Journal of American Indian Education. There are a few other publications, but research and publicity on the failures far exceeds news about the successes.

In general, the successes, in terms of improving test scores, have taken one of two strategies. The first strategy is to make the students fit the system. By immersing students in the culture of the school,

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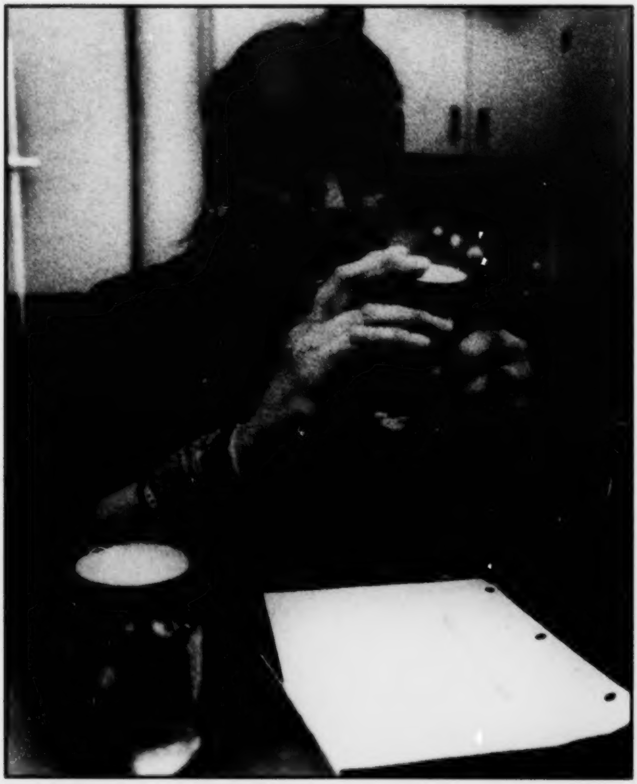
requiring all students to think in the manner of the materials, some schools have had considerable success. Parochial and private schools favor this approach, but BIA schools generally fall into these practices as well. It appears to take a great deal of time, energy, and money to fully implement this approach, since Native American students have to be given remediation in academic skills, enrichment of cultural awareness, field trips, and material trappings which their parents cannot afford in some cases or do not think necessary in other cases. The effort is to remove Native American students from their own culture and background and create an artificial background for them so that they can enter the world of work off-reservation. In a few situations they may be offered some elements of their birth culture to bring with them as they "advance" in order to retain identity. Often, what they are encouraged to bring are costumes and dances with which they can entertain the dominant culture.

A second strategy, which has also been successful in the sense of improving school retention and test scores, but not well publicized, is that of what is basically outcomes based education. Parents, school board, teachers and students determine appropriate outcomes for the school and for the local situation, and all determine appropriate educational processes necessary to accomplish those outcomes. Most often, the outcomes used are subject area outcomes, i.e. outcomes in math, in reading, in social studies, etc. Thus, generally the same types of materials are used for teaching as in other schools, though the methodology might be somewhat different.

Without exception, though, the schools which are successful in using these strategies are uniform in their high expectation of students. They not only expect students to do well, they require it. There is no excuse for sub-standard performance. Students are held accountable for their own actions, their own performance, and, in the long run (though this is not usually apparent in the short run), their own learning.

In both of these scenarios, the question still remains as to the appropriateness of the educational system for the students involved. In both situations, the schooling, the instructional model, and the testing is derived from outside of the culture, even the language, of the students rather than developed from within.



There is a third strategy for success. Schools could start with what students need rather than with what institutions need. State legislators, school boards, accrediting associations, and others are amazing in their ability to know "what is good for everyone". The one with the least input is the student—the one with the most to gain or lose by the teaching/learning process. Cummins (1986) has an enlightening presentation of the needed redefinition for the classroom, the community and the politics of education. He argues for interactions which empower, rather than disable, students.

We can start by asking what "life skills" are necessary for a person to have when s/he leaves school. The responses generally will not have much to do with what schools think of as academic areas. Most often the responses will center around social, psychological, and learning processes (as differentiated from the learning of specific knowledge). It is quite possible to develop an appropriate and interesting curriculum around these needs while incorporating most, if not all, of state and accreditation requirements in the various subject areas. The curriculum would center around student needs and interests but utilize math, reading, art, music, writing, public speaking, and all the other skills to develop those outcomes. Most importantly, the teacher could then focus on fostering learning. The subject areas would become a vehicle for the development of the individual rather than an end unto themselves.

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Chapter 1 Main Ideas

Native American education has not been very successful throughout history.

Native American education generally utilizes a system which was developed for one culture to try to educate students of another culture.

Utilizing the students' natural interests, needs, and processes could provide for more learning.

Successful methods will likely try to fit the material to the student rather than the student to the material.

****

The whole purpose of this book is to bring change to the discouraging state of Native American education as described in this chapter. 23 years of working with Navajo and Hopi students lead me to believe that significant improvement can be brought to Native American students through increased sensitivity to culture and values. While there are other schools of thought concerning educational improvement, I believe that the cultural differences literature provides the way that is most likely to be successful. The following section outlines some of that theory and provides some values comparisons. It also cautions us to be careful in dealing with students whose values are different than those of the "system," and advises us to learn from the values of others.

Chapter 2

Traditional Views on the Value of Knowledge

There is little question that Navajo and Hopi students on their reservations have a different culture than that of the mainstream society. There are numerous publications, orientations, and workshops that try to explain various aspects of those cultural differences. Navajo Community College and other colleges and universities have semester-long courses dealing with aspects of Navajo culture. Teachers on both reservations struggle to understand specific aspects of their students' culture in order to facilitate classroom procedures. While the specifics of this chapter deal with Navajo and Hopi, some generalizations to other Native Americans and other reservations will be appropriate. These will be obvious to those working with other Native Americans.

Throughout this chapter references are made to both Navajo and Hopi tribes, customs, students, cultures, etc. In dealing with schools on both reservations and students from both tribes, I have found many more similarities than differences. Of course, there are differences between Navajos and Hopis, but both live in the same region of the Southwestern United States high desert near the Four Corners, dealing with the same environmental, economic, and educational situations. At the values level, there appears to be a commonality which allows similarities in educational practice for both tribes. Additionally, there has been much publicity about the differences and problems between Navajos and Hopis. In living and working with members of both tribes, I have found that these differences and problems have been blown out of proportion. There is much more communication, visiting, trading, and intermarriage between the tribes than would be expected from presentations in the media. In order to emphasize these points, I have been careful to indicate Navajo/Hopi in all cases where such combination is appropriate.

Values, as used in this chapter, are the underlying precepts and concepts that shape a culture (Witherspoon, 1977). They are the prerequisites, the assumptions, the scaffolding of thought processes of culture. Without different values, one culture would not differ much from another. Even foods, clothing, and daily practices would be similar if values were the same. Since Navajo/Hopi and mainstream American cultures are seen as different, it follows that their underlying values are different. By thinking about those underlying values, we should be able to understand the attributes of a culture more easily and then be able to utilize that information in forming classroom processes and procedures.

This chapter will present observations concerning the differences in values between Navajo/Hopi and mainstream American cultures (as presented in most schools). They derive from watching, talking to and working with Navajos and Hopis over a 20-year period. These observations may apply to limited areas and to certain subcultures in some instances, since the reservations encompass diverse populations. However, if we are aware of the various cultural possibilities and value aspects of the students, we will be more prepared to meet their individual needs. The areas to be explored by this chapter are those of knowledge, inquisitiveness, and questioning.

The schools generally use the American values that 1) knowledge is good and available to all who work to gain it, 2) inquisitiveness is appropriate as a way to learn since one learns by exploring and asking questions, and 3) questions are an appropriate and necessary way to gain information or knowledge.

Knowledge

Americans assume that knowledge is open to anyone who is willing to work to gain it, and that it is appropriate to use anything that is learned in any way that the student wants (with very few limitations). Navajos (and many other Native Americans) see knowledge somewhat differently. They value knowledge greatly, and see that with knowledge comes a burden of using it correctly and appropriately. Medicine men, Navajo and others, stress the need for using knowledge for the good of the people. There seems to be general agreement that those who use knowledge for selfish reasons, for their own self aggrandizement, or to harm others, should not be allowed access to the information. Medicine men, then, are often required to take actions to negate the effects of this inappropriate use of knowledge. In this area, Navajos and other Native peoples agree that the authority that knowledge bestows comes with the responsibility of using the knowledge correctly.

This is one of the reasons that various tribes have strongly objected to the performance of ceremonial activities by non-tribal members and off reservations. For example the Hopi Snake Dance was performed by Anglos in Prescott for years, and the Sioux Sun Dance has been performed by non-Native Americans and other Native Americans on Navajo. These ceremonies have stringent requirements and are very powerful. Only those initiated to appropriate societies may know the specifics of the ceremonies and the reasons for the actions. To have these ceremonies performed as spectacles by people who do not have the necessary knowledge and training is seen as akin to allowing children to play in the control center of a nuclear reactor without supervision. By pushing buttons and throwing switches, the children might possibly do no damage, but it is far more likely that they could cause a catastrophe. In the same manner, Snake Dance and Sun Dance are parts of a ceremonial cycle that keeps the world in balance. Without all the correct ceremonial elements and without complete knowledge, there will be undesirable, even devastating, effects. The inappropriate use of knowledge or use of incomplete knowledge will cause damage to the wholistic manifestation of life throughout the world.

The value difference comes from an assumption by Anglos that ceremonies are primarily for entertain-ment and an assumption by Native Americans that ceremonies are primarily for controlling or influencing nature. Where Anglos mostly depend on science to explain their world, most Native peoples are much more dependent on spiritual and wholistic elements. Of course, both cultures think and believe that their point of view is the only "correct" one. A confounding element is that most Native ceremonies happen outdoors. Anglo ceremonies happen mostly indoors, in specially designated buildings (i.e. churches, concert halls, courtrooms, auditoriums, etc.).

Inquisitiveness

Associated with the concept of knowledge is the idea of inquisitiveness. Mainstream American society encourages inquisitiveness as an appropriate way to learn. Children are encouraged to ask questions, to look and listen, to try, to take things apart. However, for Navajos, as for other tribes, there are things not to know. At various times and with various maturities there are initiations into levels of knowledge. These are most often formal occasions that stress that the initiate must protect the new knowledge from those who are not ready for it and must use it for the good of people. Thus there are many areas of restricted knowledge in the culture. While a certain amount of inquisitiveness on the part of children is expected and encouraged, the areas of restricted knowledge are not discussed with children or even with other adults who have not been appropriately initiated.

In short, there are things not to know, not to ask about. Yeibicheis, death, skinwalkers, kachinas, and many other common aspects of Native American cultures are simply not discussed with children and others. Much knowledge about medicine and healing is held by only a few people. Fewer than half a dozen people in the world know the Hopi medicine used to counteract rattlesnake poison. This has never been shared with non-native doctors or other tribal members. Children quickly learn what subjects are OK to be inquisitive about and which are best left alone.

Questioning

Questioning goes along with the acquisition of knowledge and inquisitiveness. In Anglo cultures, questioning is encouraged, even required, in both family and schooling situations. We even joke about the preschool child who asks "Why?" about everything.

Many classroom procedures require that students be active participants by questioning the teacher, with that as the preferred way to learn. While there is much validity to this way of thinking, there is another element at work on Navajo/Hopi. That is what Hall (1989) calls the "implied context content" of a language. He indicates that English is a language with "low implied context" that encourages the asking of questions to clarify points. He goes on to indicate that Navajo and Pueblo languages are much more "high context" languages. In these languages, he explains, one is not only expected to know things, but if one does not, asking questions is not appropriate. "If one does not have the situation in hand, it is prima facie evidence that one is an outsider and therefore not entitled to know" (p. 25). Questioning, then, is not an appropriate means of gaining information since it shows others that the questioner is not privy (initiated) to the subject and may not belong in the group. Hall indicates a possibility of "unconscious racism or unconscious ethnocentric bias" as a result (p. 29). Native American students will tend not to ask questions in class. If we then pay more attention to those who do ask questions, often non-Native Americans in the class, we discourage the Native Americans in their efforts to learn. We need to find alternate ways to reinforce the efforts of the Native American students.

Lamphere (1977), on the other hand shows that the offering of assistance to one who needs it is essentially a cultural imperative in Navajo and other Native American cultures. This can be used to foster learning in classrooms if utilized correctly.

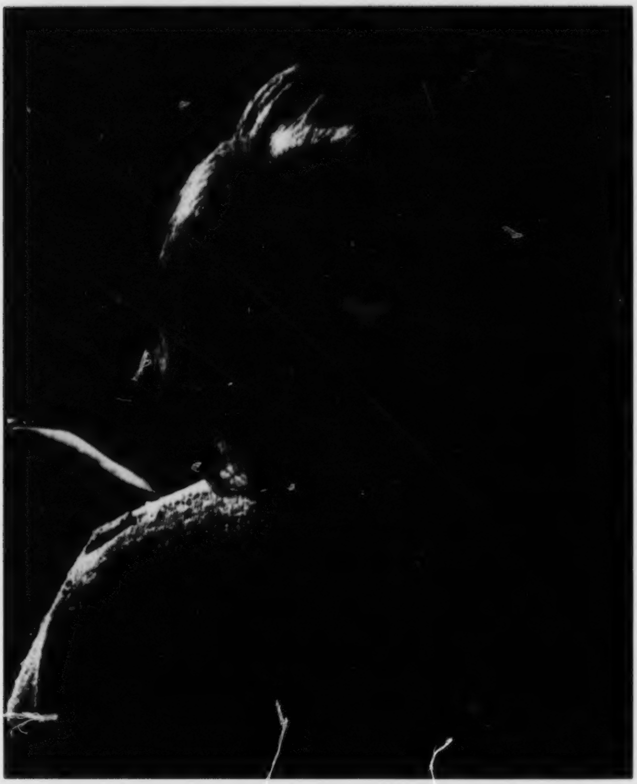
It is not implied that all questioning is inappropriate in a classroom setting, but rather that the large group question/answer strategies that we so often use might successfully be replaced with smaller group opportunities for students to observe others and to question each other and/or us in an informal manner.

Schooling

There are some serious differences in the Navajo/ Hopi ways of viewing knowledge, inquisitiveness, and questioning when compared with the mainstream American ways of viewing those activities. A confounding factor is the relationship of schooling to knowledge. Many older Native Americans who have great respect for knowledge have very little respect for schooling. These adults allow their children to attend school since it is required by law, but do not support the activities and often put roadblocks in the way of their children's full participation in school activities. Parents in some areas of the Navajo Reservation do not allow their children to do homework or read at home because "those are activities you do at school, here at home we do 'real' things."

The distinction between schooling and knowledge is well known. Educators talk about college professors in their "ivory towers." Building contractors joke about architects who design structures in ways which materials cannot accommodate. A standing joke among jazz musicians has one asking "Did you go to school?" and another answering "Not enough to hurt my music."

Navajos have great respect for knowledge and for wisdom but are quick to realize that schooling does not provide either, particularly for their reality. One leader said that parents consciously know that schooling is necessary in the modern world in order for their children to compete for jobs and material requirements for survival. Unconsciously they also know that schooling is the single element that is most likely to destroy their culture (Quamahongnewa, 1987). Much the same statement is being made by some parents of students in the northeastern part of Arizona when they refuse to allow their children to read or do homework at home. They indicate that such things are to be done at school and "real" things should be done at home (i.e. herding sheep, chopping wood, planting and caring for crops, weaving, doing ceremonial activities, etc.). By ignoring the Native values, the schools cause children to accept non-native values, thus changing the culture.



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Implications for Classrooms

In trying to develop appropriate education for Navajos, we must be aware of value differences. Unfortunately, in spite of the writings about those differences, many schools and school districts expect the cultural bridges which must be made to be one-way bridges. That is, the students must learn and understand the mainstream American ways, but it is not important for us or the school to respect or even know those elements in the Native culture. This would seem to be a very narrow way of viewing Navajo/Hopi education, and one which might explain the relative lack of success of schooling for Navajo, Hopi and other tribes (Kennedy, 1969; Platero, 1986; TCI, Inc., 1987).

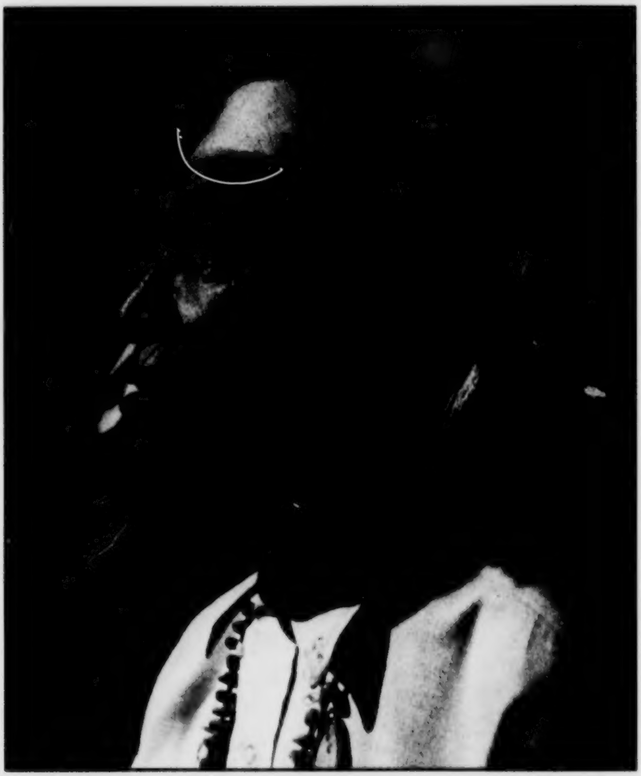
Navajo/Hopi schooling is in need of some modification, based at least in part on a more respectful application of Navajo/Hopi values. From the elements discussed above, at least two possibilities for classroom application appear. The first is a wholistic and social presentation of new ideas, emphasizing the respectful use of knowledge. The second is the development of a team approach to education.

Research indicates that Navajos and Hopis (and likely other tribes) are primarily wholistic in their worldview and their perception of ideas. (Rhodes, 1988; Rhodes, 1990; Wallis, 1983). This would support a wholistic educational process that presents the physical and social elements of knowledge simultaneously. New ideas and the responsible use of those ideas should be linked.

Education can take place in schools, with parents and others assisting at the school, but it can also take place outside of the school through assignments, research, and activities that do not require direct school control. By letting the school be only a part of the team (and at times maybe not even the team leader) that includes parents, other relatives, community members, the student, and others, a more meaningful and comprehensive approach to Navajo/Hopi education can be developed. It follows that a use of appropriate curriculum materials that are interesting and pertinent to the students in the classroom will more likely capture the interest of both students and parents. There are some of those materials available, both in English and in Native Languages, but they have not been widely disseminated.

Methodologies in the classroom may be changed as well. Becktell (1986) indicates that Navajo students need more time to watch and understand before being asked to utilize new knowledge. Others (Moore, 1987; Werner and Begishe, 1968; Scollon and Scollon, 1981; Swisher and Deyhle, 1989) indicate that learning will take place if students are allowed to watch and then try new ideas at their own pace, when they are comfortable. While it may be less appropriate for students to ask questions directly, it is quite appropriate for them to watch what we and/or other students are doing and learn from that. We will need to allow for a slower, but more complete learning process with greater and deeper understanding. By the time the student is ready to utilize the new knowledge, bridges will have already been developed with other things s/he knows. The more pertinent the new knowledge is to the student's reality, the more this is likely to happen.

Unfortunately there is not a good "cookbook" of how to teach Navajo/Hopi or other Native American students. There are many books and articles which provide appropriate materials, but some are obscure, and they have not yet been brought together. Some cultural awareness articles that try to help us teachers (Polacca, 1962; Rhodes, 1987-8) give specific



suggestions, but do not provide the background in a cultural value system so that we can understand the implications of the suggestions. One of the main reasons for the references throughout this book is to give you resources to pursue as you find areas of need for your students and areas of interest for yourself. The books edited by Gilliland (1988) and Reyhner (1992) are somewhat better than the articles, but are still lacking. Until such a manual might become available, we must be students as well. Kleinfeld (1975) indicates that an observant, sensitive, but demanding teacher who obviously and demonstratively cares about students is most likely to encourage learning. Exciting possibilities are present in the literature and programs have been developed which would seem appropriate to try for the Navajo/Hopi students. These include work in cooperative learning and some specific ideas which have appeared in the Journal of Navajo Education (Hickman, 1991 and 1990; King and Rigg, 1990; Benally et al, 1990; King, 1990). Each of these articles outlines curriculum ideas or concepts which have been successful at one or more locations on the Navajo Reservation. As other teachers try the ideas and report the results, we will be able to determine which can be used on a larger basis, and which may be more useful to specific populations.

As we observe and try techniques in our classrooms, trying to bridge the two cultural value systems for ourselves and for our students, the rapport in the classroom will improve, communication will improve, others involved in the student's lives will begin to get involved in the educational process, and the wholistic education of Navajo/Hopi students will follow.

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Chapter 2 Main Ideas

Knowledge is greatly valued in Native American Cultures. Schooling is not so important.

Knowledge has an authority component and a responsibility component.

The purpose of knowledge is to help others and to reaffirm truths.

Everything fits into a larger picture.

Chapter 3

A Comparison of School and Native American Values

The following comparison of school values with Native American values is presented in several categories and in outline form, with several suggestions for classroom implications. It is meant to provide ideas and food for thought. When ideas are presented in such abbreviated form, there is much room for misunderstanding or misinterpretation. Viewed as a whole, though, it should give a feeling for some of the differences in values between what is most often presented in schools (probably, or at least possibly, reflecting the values of the "American public") and what Native Americans generally think is important. Many items on the list support the Scollon and Scollon (1981) observations relating to the higher power and lower interpersonal distance factors of Anglos as compared to Athabaskans.

Since different tribes will be at least somewhat different, what follows are brief ideas which could then be explained more specifically and completely for specific situations. As you look through what follows, remember that they are not meant to indicate rules for behavior. Rather, they represent tendencies, hypotheses, proclivities and observations.

School	Native American
Worldview	
Knowledge is good	There are things not to know
Inquisitiveness is good	You will find out when it is time
Ask questions if you don't know	If you need to ask, you don't belong
Accept new information	Accept only known information, Integrate new with known info
Prepare for the future	Take care of now, the future will take care of itself
Competition is good	Cooperation is good (competition is good only as long as it doesn't hurt anyone)
Possessions are good	People are important (esp. relatives)
Individual ownership	Group sharing (what belongs to the group can be used anytime by anyone in the group)
Keep	Give
Frugality	Generosity
Sharing is a little like cheating	Sharing/generosity is expected
Technology is good	People-sensitive ways are good
Poverty means no money	Poverty means no resources (family)
Winning is good	Cooperating is good (let others win too)
Fact/fiction	Fact/fiction (actually lies)/mythology
History and fact are important	Mythology is as important as history & fact

Independence is good	Group is good (anonymity)
Mastery over environmental elements	Cooperation with environment
New ways are sought	Tradition has value
Learn new things	All knowledge is known
Clock watching-strict time	Time is general
Emphasis on time	Emphasis on timelessness
Time is linear	Time is circular

Work

Work is 8-5 job/office	Work is any time, any place
Money is good	Helping is good
Standardization is better	Make it fit the situation
Thinking for self is good	The good of the group comes first
Boss others	Let others decide for themselves
Offer advice to others	Don't tell others what to do
Leaders assume leadership activities	Leaders are sought out for their advice or expertise
Don't just sit there-do something	Don't just do some thing-wait until you understand
Do it quickly-fix errors later	Do it slowly and right the first time
Work (school) is paramount	Family obligations are paramount

School/Learning

Try/Guess	Be sure/think/watch
Learn from books	Learn from People
Books are a source for information	Memory is a source for information

Graduating is good	Learning is good
Schooling is good	Learning is good
Theory first, application later	Learn in context
Windows are not necessary	Need to see environment
Ideas can be separated	It is all part of the whole
Windows distract from concentration on work	Windows are necessary to keep in touch with nature
Do it quickly, fix it later	Do it right the first time
Children expect rigid structure	Children are not used to rigid structure
Control children	Allow children to learn for themselves
External testing	Self testing
Teacher is authority	Teacher is facilitator
Excellence reflects on the individual	Excellence reflects on the group
Abstract learning is more advanced visual imagery, symbols	Active participation necessary role-play, observation
Visual skills important	Listening skills important (Oral tradition)

Communication

Talk too much	Do not speak
Talk first	Keep silent
Make your point (Aggressiveness)	Avoid confrontation (Submissiveness?)
Talk to strangers	Keep quite with strangers until you get to know them
Brag	Play down abilities
Future-oriented	Deny planning
Interrupt	Never start a conversation

Talk off the topic, around issue	Talk only about what they are interested in
Don't give others a chance to talk	Are slow to take a turn in talking

Family/People

Children are like property	Children are respected as much as adults
Nuclear family	Extended family
Individualism	Attachment to community/family
Individual is important	Group is important
Strive for young look	Age is respected
Discipline is external	Discipline is internal
Only adults may care for children	Older children routinely care for younger

Other

Profanity concerning taboos	No profanity
Vote to decide	Group decisions by consensus
Oriented to efficiency	Oriented to people/groups
Religion is for Sunday	Religion is every day

What to do in the classroom

Below are listed some ideas for classroom activity that derive from the values comparisons on the previous pages. They are presented simply as food for thought and in arbitrary categories. The experienced teacher and the student of Native American cultures will already know most of what is presented. The new teacher to the reservation or to Native American education may find several useful ideas.

Parents/community members

Involve parents, at home and at school.

- Let them make things for the children to use.
- Be aware of role of grandparents, maternal and paternal aunts and uncles, and clan

relatives in the culture and expect it for those relationships in the classroom.

Wholistic

Students are task- and goal-oriented.

Focus attention on quality and/or quantity (whichever is appropriate).

Students are wholistic learners. They need to understand how their task fits in a larger picture.

Allow adequate time to finish a task well. Don't rush, but teach students to work toward timelines gradually.

Know "why," not just "how".

Short-term, present-oriented goals work best, particularly for younger students.

Wait time

Allow longer response times/silence.

Wait time may need to be as much as 45-90 seconds between question and response.

Silence may be time for student to consider answer or may indicate reluctance to answer. Teacher must be sensitive.

Cooperative learning

Let students help students, encourage group cooperation (cooperative learning).

Peer tutoring, cross grade tutoring.

Group success is more important than excelling individually.

Use games and activities which result in team winners rather than individual winners (and losers).

Expect sharing and cooperation/helping. What belongs to the group can be used by any in the group. Possessions are not individual.

Strive for consensus rather than voting for decision-making.

Learn by doing

Don't depend on verbal interaction alone.

Use art and play as a form of symbolic expression.
- Puppets.
- Tribally made materials.

Allow time to watch and understand—try later.

Curiosity may not be rewarded at home. Children learn by watching and being patient.

Give lots of examples, show often, then help.

Use time flexibly.

Rapport

Treat students with the same respect you would show another adult.
- Listen to them actively.
- Consider their ideas and offer yours as suggestions.

Expect and demand good work.

Deal with each student as an individual, avoid "professional distance" or aloofness.

Help students adjust to the "system" and help the "system" adjust to the students.

Looking at another person in the eye may be thought of by some to show disrespect.

Avoid confrontation.

Money, jobs, future goals will have minimal effects on motivation.
- Much more effective are pleasing others (even the teacher), helping the group (or team or school), and doing the right (best) thing.

Testing/evaluation

Putting the parts together into a whole (essay) is much easier than picking one part out of unrelated elements (multiple choice).

Student efforts will be to be correct the first time, not guess, even if it takes longer.

    When in doubt, students will tend to do nothing (not answer, but also not go on to the next question).

Real life testing situations deal more with putting knowledge together into a viable solution, creating one or more workable answers. Most often there is not just one correct possibility.

Students tend to evaluate their performance themselves, by whether their solution worked (or helped).

Can students help each other with projects and tests? Is it more important when and how a student learns or that s/he learns?

Timed testing is often less accurate than power testing.

Motivation/discipline

Discipline is an aspect of motivation.

- If students are motivated, discipline takes care of itself.
- Motivation comes from understanding and believing in the relationship of school activities to the whole of life.

Reprimand and praise in private rather than in public.

Organized Sports

Team sports must be handled carefully to be non-destructive to the culture.

Individual sports with the member representing the team or school are more compatible.

Running encompasses many elements of life.

It is important that all who desire get to participate.

Winning is not the goal—participating, trying, working, cooperating, helping is.

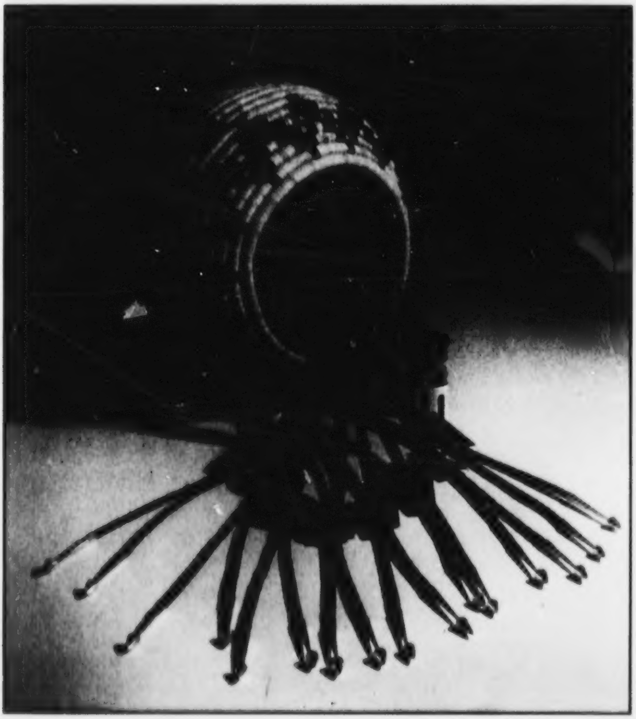
The other team needs to feel good about themselves too—they should win sometimes.

Outstanding performers need to be humble and help others on the team.

No individual should stick out too much. They should particularly not bring attention to their skill.
Rather, they should share it.

Administration

A participatory management style with mutual respect of students, teachers, and administrators. There can be a realization of difference of function and responsibility, but all are part of a team.
Bottom-up management.
Flexible management.
All are learners, no one "knows," all are helping each other.



Concerning values, Pepper (1985) comments that "A typical listing includes reverence for nature; respect for elders; giving and sharing; being nonmaterialistic, noncompetitive, group-oriented; Indian time-oriented and many others. It is now becoming apparent to Indian educators that these and other values attributed to Indians are often automatically glorified without really being understood. Moreover, some typical Indian values and behaviors are quite negative, and these are rarely discussed. For example, the traits of jealousy, vengeance and face saving are very prominent in Indian culture and govern a great deal of Indian behavior, much to the detriment of Indians as a people." (p. ix) He continues that the resulting cultural clash results in many problems for Native American students and teachers of Native American students. These traits imply that both rewards and punishments will be more effective if done more privately than publicly. They also imply that teachers need to take great care to keep interactions on a positive note.

Lamphere (1977) outlines specific values for Navajos, particularly concerning interpersonal relationships, which must be followed. Others who provide pertinent material for cultural values comparisons are Phillips (1972), Erikson and Mohatt (1982), Witherspoon (1977), and John (1972).

Scollon and Scollon (1981) show that there is a great difference in discourse styles between speakers of American English and Athabaskan languages, with the values implicit in the two language processes directly at odds with other. For example, Athabaskans tend not to speak until they know the points of view of all those in the group, where English speakers tend to use conversation to discover those points of view. Another example is that for English speakers, the dominant person generally takes the role of the observer, expecting the subordinate person to demonstrate their abilities. For Athabaskans, there is no such expectation. Rather, the adult parent or teacher is expected to demonstrate abilities to the child in order that they may be learned. The Adult is the exhibitor and the child is the spectator (pp. 14-19).

The Scollons imply that schools will have a difficult time with assumptions teachers who speak American English will make about students who are Athabaskans. They continue to indicate that changing a people's discourse pattern, through schooling or other means, should be approached cautiously since it is not clear how this may produce other cultural changes.

Giroux and McLaren (1992) continue the argument by explaining the relationship of language in schooling as the means by which individuals make sense of their experiences, including conscious and unconscious understandings. Schooling in English, then, would present a biased view of reality for Native American students, missing some of the analytical process which might be present in their native language. Teachers will need to take care to minimize the effects of presenting concepts in their classrooms only through the eyes and values of the dominant culture.

It is important that the serious student of cultural values follow up with some of the references cited in this chapter in order to be able to understand and utilize the elements of the values list in specific cultures and in classroom settings.

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Chapter 3 Main Ideas

Native American values and those of the schools are often out of sync.

Respect for Native American values leads to somewhat different approaches in the classroom, none of which are impossible or unreasonable.

Since student thought processes are more in tune with those of the home than those of the school, it makes sense to adapt the schooling process whenever possible.

Chapter 4
At-Risk Students[1]

By some observations, the entire population of Native American students is at risk of not succeeding in the educational system. This chapter combines information presented in previous chapters to present an argument for change in the system. The concept that the value system of children and their culture could be the prime factor in making those children at-risk in the education system is explored.

COLUMBUS' CONTRIBUTION TO THE AT-RISK CHILD

Five hundred years ago Columbus "discovered" America and one of the most insidious things he brought with him was an attitude. The attitude was that he and what he represented were better than whatever and whomever he found.

The attitude of superiority cannot be attributed only to Columbus. It was manifested by most Europeans in their efforts at world conquest, spreading Christianity, and territorial expansion. The Spanish, French, Dutch, and others all came to America with the idea that they were superior. It was not only Europeans who came with that attitude. Each culture brought ethnic and cultural pride to America in their efforts to settle the "uninhabited" continent. If they were superior, that meant that their ways of doing things, their systems, their schools, their religion, their values were all superior to whatever they found in America or in other cultures.

In the middle ages, the effort was made to spread Christianity through the Crusades. When that effort finished (failed), the energy turned to territorial expansion, but for the same purpose. New lands and new peoples were claimed in the name of kings, queens, and churches.

As Native American cultures were subjugated by the intruding Europeans, whose path had been marked by Columbus (or perhaps Amerigo Vespuchi or Leif Erickson), systems were imposed to make those already in America more like those who had just come. Schools, churches, governmental systems were all set up to make the Native Americans conform. And many did, at least on the surface and partially. However, remnants of Native American cultures exist throughout America, and are especially strong in the West and Southwest.

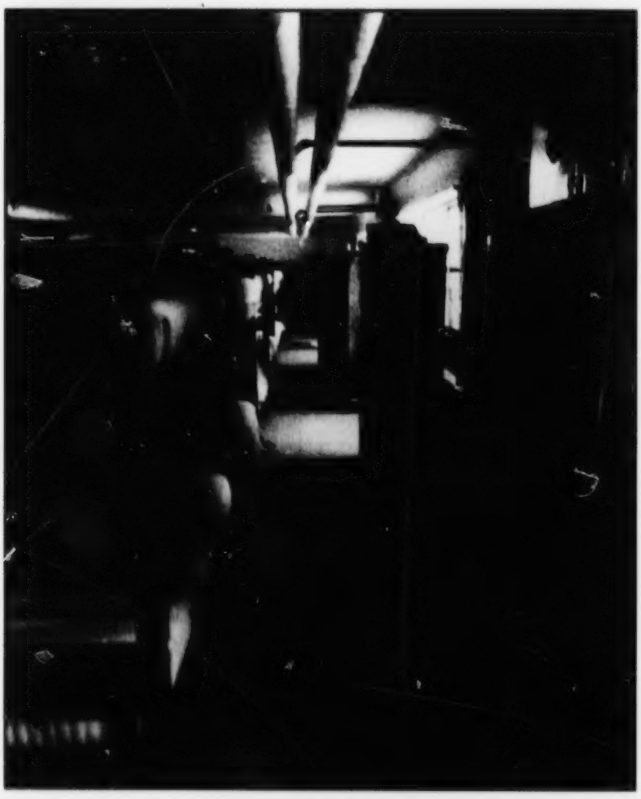
The US governmental goal of acculturation, which was discussed and written about openly a few decades ago, did not work. The Native Americans of the United States maintained their integrity rather than become simply a part of a larger whole. The youth became dropouts of the system, returning to the ways and lands of their ancestors, but without the tools to cope with the changes that had taken place in their homelands.

Schools, health professionals, and tribal officials soon began to recognize these students as "at-risk," and began to take steps to keep them within existing education, health and government systems. Identification of "at-risk" students began to be a priority in schools and other systems, in order to provide intervention strategies before the students escaped reach. Unfortunately many of the instruments designed to identify these "at risk" individuals, exacerbated rather than helped the problem.

Identification of at-risk children is a task which must be approached cautiously. At-risk children, by definition, are barely staying within the system, almost ready to drop out. This is true whether the system be one of education, health, social welfare, or other. If evaluation is done haphazardly or inappropriately, the resultant incorrect identification will produce both false positives and false negatives. That is, those who need help will not be identified and will not get the help they need, likely encouraging them to leave the system. In the same manner, those who actually do not need help may be identified incorrectly, resulting in placement in inappropriate programs, which, in turn, results in wasted resources and frustrated children. Either way, the likely result is children leaving the system.

In working with Navajo and Hopi children on the reservations in Northern Arizona, I found (see chapter 13)that cultural aspects implicit in both the content and the process of various testing strategies was a significant factor in accurate analysis of student abilities.

One example of content bias on a primary level nationally normed achievement test was a picture of a power boat with the student expected to choose the correct response for a question such as "Where do you see this? a) in the sky, b) on the highway, c) on water." The "correct" answer, of course is "on water," but reservation Navajos and Hopis mostly see power boats on trailers being pulled to Lake Powell or back home from there, so most primary students indicated that they see power boats on the highway. They are not wrong, but the test is not sensitive to their reality.



Another example often used in testing situations is that of a paragraph to be read and a series of multiple choice questions to be answered from that paragraph. In the study outlined in Chapter 7, Navajo students were 69% and Hopi students were 67% wholistic learners, so taking a paragraph out of a context was difficult. These students grasped new material more quickly and more easily when it was presented in a larger context that was meaningful to them. The test intentionally does not do this, leaving them at a disadvantage, both from the standpoint of comprehension of the material and from the time restraints imposed.

This wholistic aspect of the Native American makeup has implications for testing strategies in general. It could be deduced from the research, that a sequential approach to evaluation in which the subject does not fully understand the purpose of the instruments and approaches would be less effective for Navajo and Hopi subjects than it might be for non-Native American subjects.

In Navajo and Hopi cultures, reality is somewhat different than it is in the dominant society, with the result that test questions become somewhat less meaningful and much more difficult to answer in a multiple choice format, a sort of process bias. (See Chapter 9 on testing for a discussion of this point.)

Reyhner (1992) quotes the National Center for Educational Statistics (1989) as indicating American Indian and Alaska Native dropout rate from schools at 35.5%, about twice the national average, and gives seven reasons for that rate. One is inappropriate evaluation.

When the basic precepts of a subject's culture are different than those for which an evaluation instrument is developed, accurate results cannot be expected. Moore (1982) talks about work by Whorf indicating that the Hopi language prefers verbs while English prefers nouns. Propositions about things are turned into propositions about events in Hopi. Saville-Troike (1984) explains a basic difference in the concept of obtaining knowledge. She explains that for the Navajo, all knowledge is already present. Individuals need only learn it with the purpose of cultural preservation. For schools, she says, knowledge is expected to change, so children are taught to learn how to learn, to question, and to test theories. The function of education, then, is cultural change. The potential for conflict is obvious.

With such basic differences in value systems, cultures, approaches to education, norms, and more, how then, can appropriate evaluation be done on children? LaCelle-Peterson and Rivera (1994) show how difficult it is to evaluate students whose first language is not English. They propose a framework and caution that testing be done only to improve instruction, not to label or categorize students. Masayesva (1976), when he was principal at Hotevilla Bacavi Community School, felt so strongly about this later point that he refused special education monies for his school since acceptance required testing and identifying students. He felt strongly that this process was against the Hopi way of dealing with individuals.

It is suggested that a more wholistic approach to evaluation be utilized, based on an ability (in cultural context) model rather than on a deficiency model. Much current testing measures child performance compared to norms. The evaluator is looking for areas in which the child does not measure up to the norm.

An ability model would look at the child rather than at the norms. It would be more appropriate to see what the child can do rather than what the child cannot do. The focus could then be on strengths rather than on weaknesses, on successes rather than on failures. Becktell (1986) indicated that Navajo students do not learn well in a "trial and error" environment. They need a "trial and success" environment.

There is an assumption that "at-risk children," if they do indeed drop out of the system, can only become failures. This definition is that of the "system," not that of the child. These children survive, by their definition, by dropping out of the system. Within the system, they are forced to fail, while out of the system, they can find a measure of success on their own. Giroux (1988) identifies these students as resistant rather than deviant. By trying to identify "at-risk" children and keep them within the system, we are assuming that the "system" is correct and the child would be incorrect to drop out. This assumes the norms and values of the system are appropriate for everyone. Giroux (1988) feels that such student actions raise questions about the nature of schooling.

"At-risk children," by definition, are about ready to make a change in their situation in order to increase their well-being or their opportunity for survival as they see it. It may be that the "system" needs to reevaluate itself in much the same light to determine if it needs change in order to survive. As dropouts increase and "at-risk" becomes a large factor in a system, the message is that the students and the system do not match up. Either the children can change to stay in the system, or the system can change to become more appropriate for the children. Neither choice is necessarily better than the other, but we must consider reality. Systems come and go, but children are always here. By reevaluating our perspective, we may be able to undo some of the damage the attitude brought by Columbus has caused for the Native peoples of America.

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Chapter 4 Main Ideas

The system was developed for non-Natives. It is being imposed on Native Americans, usually with little thought.

Native Americans are showing that they don't fit the system by dropping out and being relatively unsuccessful.

The system is not unchangeable.

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[1] Much of the content of this chapter was presented at the Sixth International Conference on Children at Risk in Santa Fe, October 1, 1992. It was also printed in the Journal of Navajo Education, Fall 1992, 10 (1).

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Chapter 5

Learning from Native American Values

Chapter 4 raises the concern that Native American students may become at-risk in educational situations, in part, due to the difference in culture and values between the school and the student. This chapter looks as the issue from the other direction. Now we look at what we can learn from Native American cultures that may help in the values development of the majority culture, and we look at the possibility that, through the educational system, there is a chance that Native cultures may be thoughtlessly extinguished. Many citations from the previous three chapters would be pertinent in this one also. I have tried not to be overly redundant in that regard.

When cultures bump up against each other, the comparison of values becomes an issue. The values of a culture are what make those people unique. Most often those values are implemented unconsciously. They are implanted in children by parents and other institutions of a culture, by modeling, by implication, and mostly without discussion. They provide the characteristics of a culture. Lamphere (1977) talks about Navajos helping those in need, particularly family members, without expectation of compensation or obligation in return. That is not talked about in Navajo culture, it is just done. However, when a friend or relative is having problems on a test in school, the Navajo obligation to help leads to cheating. The applicable Anglo value in a testing situation is independence and individual responsibility.

The family members Lamphere is talking about are extended family. Generally, when Anglos talk about family, they are talking about nuclear family. As mentioned in Chapter 9, Hopi and Navajo discipline come from outside the immediate family, encouraging nuclear family unity. Dennis (1940) presents

specific examples of this from Hopi culture. Motivation and discipline techniques in Anglo culture often lead to tension within the family. Perhaps there is something we can all use from these cultures in maintaining family cohesion.

Scollon and Scollon (1981) show the comparison of power structure and interpersonal distance for Anglo and Athabaskan cultures as in Figure 1 below. The implications are that there are more and more levels of authority figures in Anglo culture than in Athabaskan. Also, the Athabaskans refrain from interfering in each others' lives more than do Anglos.

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Figure 1
Anglo/Athabaskan

	Anglo	Athabaskan
Power	High	Low
Distance	Low	High

****

In schools, Anglo values are implicit in the curriculum and in classroom procedures. The very structure of the institution has several levels of "power," as the Scollons describe, with students and teachers expecting to be told what to do by someone else. Athabaskan, and perhaps other Native American cultures, would use less power structure and more expectation of decision making at lower levels. A possible inference is that the Native American cultures expect more independence. Anglo efforts to foster independence may want to look at that aspect of Native cultures for some ideas.

The emphasis on non-competitive, cooperative processes in Native American education (Swisher and Deyhle, 1987; Polacca, 1962; Pepper, 1985) implies an interdependent element in the cultures, that could be explored by those looking for team-building techniques.

Basso (1979) explores the Anglo preference for speech and interaction from an Apache viewpoint, again indicating value differences in classrooms. Heath (1963) pursues language and literacy acquisition from a cultural differences view and encourages learners to be ethnographers in order to be able to accept and utilize the differences. Witherspoon (1977), John (1972) and countless others have given us material to digest in analyzing the cultural values interface that happens in classrooms. The more we look at the way values are instilled in other cultures, the more we see that might provide a means for values development in our own situations. This sampling provides a few possibilities for utilizing elements of Native American values in the majority system. As we look deeper, we find endless instances of useful possibilities.

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Since we base our assumptions on our values, the difference in value systems will naturally lead to different expectations for action when people of different cultures meet, as in schools. By looking at the areas of differences, each culture has opportunities to look at values consciously and talk about them. Otherwise they would go unnoticed. Since many Native American tribes have well defined value systems, the differences provide us with significant opportunities to look at ourselves and at Native American values in a healthy, constructive manner. We then have an opportunity to ask "Are we happy with ourselves?" and "Are we happy with what we are doing to others?"

One of the problems, though, of using materials and procedures designed for one culture on another is that the students may begin to think that what is done at school is "better" than what is done at home. The students may think: 1) My parents tell me to go to school, do well and graduate. 2) The school presents things differently than at home. 3) The school does not seem to pay much attention to what I do at home, but my parents do talk about what happens at school. 4) Therefore, what I learn at school is more important than what I learn at home. 5) I should try to be more like they teach at school, like my teacher, and not try to be like my parents.

Even though we are not trying to influence students as outlined in the preceding paragraph, by using materials and procedures based on the values of the dominant culture, we may imply that it is better, more acceptable, than the home values.

There are schools of thought that do advocate that American schools are to make all students essentially the same. Proponents of "English only" are trying to get language skills of students, in English, to be somewhat equivalent. Adherents to bilingual and bilingual/bicultural programs, on the other hand, celebrate differences.

Anglo/European culture has a long history of trying to make others "like us," in religion, in language and in other values. Our culture, with its low distance factor (Scollon and Scollon, 1981), allows us to tell others what to do. The higher distance factor in other cultures, on the other hand, does not allow the other cultures to confront aggressive situations. Thompson and Joseph (1944) state that Hopi culture "demands conformity to a rather rigid, anti-aggressive ethical code..." (p. 48). The long-term effect of such a situation, as with schooling in only the dominance value system, has to be the eventual change of the minority culture/values. Before that happens, shouldn't we first 1) see what we could learn from other cultures, 2) be sure that we do indeed want to change other cultures to be more like the dominant, and 3) be sure that the people of the other culture want to be changed?

There is an alternative to diminishing minority cultures through enforcement of the dominant. That is what Lacelle-Peterson and Rivera (1994) are talking about in their efforts to provide an equitable educational system or limited-English-proficient or English language learners. They remind us that we already have a multicultural, multilingual society. They present a case for us to respect cultures, diversity, and languages. There is a large body of literature supporting this view (Cummins, 1989; Collier, 1992; Ramirez, Yuen, Ramey & Billings, 1991, and many more). Sleeter (1989) provides an interesting overview of multicultural education. Also helpful are the writings of James Banks (such as 1991).

Most educational systems derive from a culture rather than being imposed on a culture. Therefore the values that are appropriate for children entering the community are a part of the system. This would allow study of other cultures, other values without compromising the system. Then, by looking at other cultures, the values and reasons for those values in others can be studied. Reasons for values in a construct can be determined and possibilities for use discussed in a classroom setting. Through this process, students would gain a stronger sense of their own values and an awareness that others have differences for a reason. Different cultures throughout the world work for their people, survive over time, and modify themselves as needed. The process outlined would help students understand why, and allow them to gain from others.

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Chapter 5 Main Ideas

Native American values give us a comparison with which to look at and understand our own values.

Schools have values implicit in curriculum materials and processes.

We need to proceed cautiously before trying to change or eliminate values and cultures of others.

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The following chapters take the concepts of cultural differences and values into the classroom to help make the daily interface between Native American student and teacher easier. The next three chapters deal specifically with how Native American students learn most easily and how that information can be used.

Chapter 6

The Same or Different?

Are Native American students the same as or different from non-Native American students? The answer is that they are the same—and that they are different. As with most generalizations and categorizations, there is not a simple answer. Native American students are the same as anyone else—sometimes and in some ways. They are also different from non-Native Americans—sometimes and in some ways. Each student is an individual, no matter their ethnic origin. What we are looking for in this chapter are generalizations which may be useful in the teaching/learning situation, not categories or classifications.

It is recognized that schools, teachers and students are a part of a larger system and that the place of educational systems in cultures is not simple. However, in order to begin to look at what we can do in the classroom, it is helpful to look at how students fit the system. From that, we can begin to determine changes needed within our classrooms and within the larger systems.

Physical differences between cultures are obvious, including height, build, skin color, etc. Differences in thinking processes, cognitive and learning styles, and such are not so obvious, yet they also exist between cultures. Cattey (1980) discusses experiments by Freedman which indicate striking differences in reactions of 48 hour old babies by ethnic heritage. Caucasian babies were found to cry more easily and were harder to console than were Chinese or Navajo babies. Caucasian babies fought when their nose was covered while Chinese babies simply breathed through their mouths. Navajo babies cried rarely, had reduced movement of limbs, and were very easily calmed. Cattey goes on to describe other experimentation in which Navajo mothers attracted their babies attention using mostly their eyes while Caucasian mothers used movement and voices.

Kleinfeld (1973) presents an argument that genetic factors may help account for the high level of figural abilities in Eskimos. She also emphasizes that socialization practices have an effect. For example, with minimal clues, Eskimos can discern figures from a background, like seeing a polar bear on ice or patterns in a complex field. Her argument, though, is that there are indeed observable differences in ability and learning in Native Americans. Some of the differences, some of their strengths, may be attributed to both genetics and to culture.

If Native American students were just the same as non-Native American students, then they should perform just as well on standardized tests, have similar dropout rates, have as much success in college, etc. That simply is not the case. Since the students, particularly in off-reservation schools, have the same curriculum, the same teachers, the same methodologies, etc., then there has to be some other element which is *not* the same.

Perhaps it is the family.

Native American family life is often somewhat different than that of non-Native American students. The Native American families are generally larger, often with extended family members living in the home, or who visit often and are otherwise involved frequently in family life. The median income level of Native American families is lower than the median income of non-Native Americans. Indeed, the closer the variables are controlled, the more similar the student performance. That is, if families of comparable size and income are checked, the students perform more alike than if averages are used. However, these factors do not offer a complete explanation. Even controlling the variables, there are significant differences in test scores, graduation, college success, etc.

Therefore, the answer to the question of whether Native American students are different than non-Native Americans has to be a yes—a little bit, sort of. This subtle difference is found more in the thinking and values processes used. It is probably culturally based, even for families which have been away from direct contact with the main elements of their culture for a generation or two. Cantoni (1991) indicates that cultural elements of a native language, and therefore of thinking, are present even though the individual may not speak the native language. As will be shown in subsequent chapters, the learning styles are somewhat different, decision making strategies may be somewhat different, values may be a little different, and the more wholistic view of the self in relation to the world is a little different.

Are these differences something we should worry about? Probably not. All students, and all Native American students, can learn in almost any situation. If we focus on differences, we need to be careful not to categorize. Are they something we should be aware of? Probably so. There are ways of approaching Native American students which will make learning easier for them and increase the likelihood of them continuing their schooling.

Now, the qualified answer to the question of whether Native American students are different from non-Native Americans has to be a qualified no—at least not as to ability to succeed at anything that anyone else can do. They are not deficient in any way. In fact, they are amazing in that they can adapt to the needs of a culturally foreign institution, the school, and still maintain their self-identity, their language (in most cases and to some degree), and elements of their culture. They can do everything a non-Native American student can do, and more. Research (Dennis, 1942; Deyhle, 1983; Kleinfeld, 1973; McCartin & Schill, 1977) shows higher than average abilities in some areas, and lower test scores in others. If they were given a chance, it would be interesting to see how they would integrate the wholistic and naturalistic world-view of their culture with the compartmentalized, specific approach of schools. Given a chance to integrate and develop ideas, Native American students could possibly develop new combinations of ideas, processes, techniques, awareness. Our scientific way of seeing things could change. That is an exciting possibility!

In developing our teaching style (actually now our "fostering learning" style), we will need to be aware that most of us teach the way we were taught. We don't even teach in our own learning style most of the time. This will become more apparent as we go through Chapter 3 on learning styles. We have to realize that most students are amazingly resilient and can survive some pretty mediocre learning situations. We did! If we can change our teaching style a little to be more sensitive to what Native American students need in order to learn best, we will have done a great service to them. It will at least be a step toward improving their schooling. What we have been doing is probably not bad, but what we can do will surely be better. We will become students ourselves in that we will be studying our students. When they learn, we will have done something right, so we will do those sorts of things more often. When they don't learn, we will try to evaluate the teaching/learning situation to see what inhibited learning and do that less in the future.

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Cultural Sensitivity

Following are some ideas, with their references, found in exploring differences in thought processes, primarily in the area of math. While these were found in the literature, some statements may be suspect. The point is, we teachers really don't know the student point of view or thought process. We are learning, we are not authorities. What follows is based in "cultural differences theory." Erickson and Mohatt (1982) amplify aspects of the culture as it applies to the classroom of Native American students.

The examples are presented to give food for thought and additional references which may be helpful. Much of what is said below about Navajos is also appropriate for Hopis and other Native Americans, but since this section is referenced, the examples leave this out. The body of literature and research is much larger for Navajo than for most other tribes.

Most of the examples below have roots in language and linguistics. This leads to an observation that a better understanding of these factors in the classroom would help the teacher. Cazden, John & Hymes (1972) and Phillips (1993) present good information as to how language and culture affect the classroom interaction.

They also show that the language and cultural implications in language interaction play a much larger role than most teachers realize. It is recognized that other elements show cultural differences also, but those below are present in the literature.

Numbers

Anglo folklore uses stories with numbers (3 little pigs, 7 dwarfs, 3 bears, etc.). Navajo folklore is more personal with emphasis placed on characteristics of animals and few number concepts. (Moore, p. 11) (e.g. The looks and actions of coyotes or their prey are more important than the number of coyotes or prey.)

Navajos emphasize the number 4. Even numbers represent blessing and divinity and odd represent evil and harm. (Moore, p. 11)

Navajo language has no word for "number." (Moore, p. 18)

The Navajo numbering system (in Navajo) is developed to 999. (Moore, p. 18)

Navajo stars have four points, rather than 5. (Moore, p. 12)

Things are generally not counted, they are unique. (Cantoni, p. 37)

The Crow language has numbers to 1 million, but has little use for more than 1 thousand. (Schindler and Davison, p. 31)

Precise numbers and counting are most often related to concrete objects. (Cantoni, p. 37)

Numbers are not abstracted and operated upon. (Cantoni, p. 37)

Grouping/categories

The basic color categorizations do not match in different cultures. In Navajo, blue and green are in the same category. Black has two categories. In Choctaw, Yellow and Brown are together. (Saville-Troike, p. 47)

Anglo culture associates mood with colors; Navajo associates color with direction. (Saville-Troike, p. 47)

Conservation

Conservation concepts may be different in different cultures. (Moore, p. 8)(Based on experiments of conservation of substance, weight, and displacement when shape varied, done with Native American and Anglo students.) (e.g. Navajo language has different words for a piece of rope, depending on whether it is coiled or stretched out. Therefore, even though it is the same length of rope, it is not the same.)

Operations

Navajo language has no word for multiply. (Moore, p. 4)

Navajo language has no word for divide. (Moore, p. 5)

Crow language has no words for multiply or divide. (Schindler and Davison, p. 31)

Ratios (or divisions) may be inadequately formed concepts in Navajo. (Moore, p. 6)

Navajo students may add objects instead of adding numbers. i.e. 10+1/2+1/2+1/2=13. (Moore, p. 18) (each "1/2" is seen as one element and added as "1")

Comparing Anglos and Pueblo Indians, Anglos were better at arithmetic, Pueblos better at measurement, Anglos slightly better at geometry, Pueblos slightly better at algebra. (Scott, p. 18.)

"To double" is not well understood by Navajo students. (Smith)

Geometry

In Navajo, triangle is an unfamiliar shape, hexagon is familiar. (Saville-Troike, p. 48)

Crow language has words for square and circle, but not triangle. (Schindler and Davison, p. 31)

Mathematical memory is essential for rug weavers to remember their pattern. (Moore, p. 13)

Geometry is based on Euclidean concepts, dominated by the straight line. Navajo has little or no role for straight lines. (Moore, p. 22-23)

Navajo measurements are by means of a mental picture, or by "eye." (Cantoni, p. 40)

People who see the world as static, constant, and segmentable, made up of part-whole relationships will think it reasonable to segment and divide land and measure it. Navajos don't, so they haven't developed a system for that. (Cantoni, p. 40)

Loom beadwork has properties that illustrate mathematical concepts in Euclidean geometry, coordinate geometry, number theory, and measurement. (Bradley, p. 101)

Reservation Native Americans have a different perceptual base. (Smith)

Navajo students could visualize things very well. (Smith)

Hypothesis

Navajo language has no word for "if." Hypothetical thinking is not readily accepted by some Native American students. (Moore, p. 6)

Classroom Suggestions

Start with spatial ideas and move on to the introduction of number much later.(Cantoni, p. 39)

Incorporate an idea of space as dynamic and indivisible. (Cantoni, p. 39, from Pinxten)

Attempt to close the gap between the hypothesis and the real world. Use laboratory method and concrete models. (Moore, p. 22)

Discovery-based teaching should be avoided when verbal responses are expected. Non-verbal discovery methods are fine. (Bradley, p. 99)

Use experientially based learning. (Cajete, p. 10-11)

Use an application-oriented approach. (Cheek, "Participation," p. 111)

Students like the privacy and self-pacing of computer assisted instruction. (Cheek, "Participation," p. 111)

Use an experience-based curriculum that integrates the Native American students' school, home, and other life experiences. (Bradley, p. 101-2)

Derive content from the immediate environment of the student. (Cajete, p. 10)

Integrate Native American issues and concerns with material. (Cajete, p. 10)

Look at how the culture used math concepts and include those in the curriculum. (Cheek, p. 5)

Relate skill development to real world situations. (Trent & Gilman, p. 41)

Introduce math concepts via materials and examples from both the dominant culture and the specific ethnic culture of the students.(Cheek, "Research Map," p. 5 and Cheek, "Participation," p. 109)

Individualize instruction in arithmetic, using a "rhythmic" methodology based on the child's readiness for a given concept. (Trent & Gilman, p. 41)

Incorporate creative writing with math/science. (Cajete, p. 11)

Present art as a vehicle for creativity in science and math. (Cajete, p. 11-12)

Use the memory abilities of Native American students. (Bradley, p. 100)

Let students develop ways to solve new mathematics problems. (Bradley, p. 100)

Other(Interesting Tidbits)

The "doing" is more important than the product (i.e. sandpaintings in ceremonies). (Saville-Troike, p. 45)

Whorf says Hopi prefers verbs, English prefers nouns. Propositions about things are turned into propositions about events. (Moore, p. 3)

Kluckholm and Leighton indicate that language is so different, it represents a different way of thinking. (Moore, p. 3)

Cultures differ in whether or not it is considered appropriate for children to express their feelings, and these differences may affect children's performance in mathematics. (Bradley, p. 99)

The "Navajo Way" is often in conflict with formal schooling.

Navajo: All knowledge is already present. One need only learn it. The essential purpose of education is cultural preservation.

Schools: Knowledge will change. Children are taught to how to learn, to question and test theories. The function of education is cultural change.

Navajo: Learn by observation and imitation. Try a task when sure of success (failure would result in shame).

Schools: Learn by doing, trial and error, failures brushed away. (Saville-Troike, p. 46)

Part of being in harmony with others is not imposing one's will upon them. In Navajo, one cannot say "I made someone do something." (Saville-Troike, p. 46)

Navajos keep silence initially upon encountering unfamiliar people and situations. (Saville-Troike, p. 47)

Traditional Navajos do not believe in saying their own name. (Saville-Troike, p. 47)

Stories about bears should not be used. Stories about hibernating animals should be told only when they are hibernating. Coyote stories should be used only at the appropriate times. (Saville-Troike, p. 48)

Boys and girls of same clan should not hold hands for dancing or circle games. (Saville-Troike, p. 48)

The order of nouns in a sentence is important. The first noun is dominant. (Moore, p. 13)

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Some Native Americans and some who teach Native Americans are very reluctant to identify Native American or specific tribal "traits" fearing that it will lead to stereotyping, categorizing, and labeling. These people insist that Native American students are "the same" as any other students. In some senses they are correct, but in other ways they are ignoring strengths and factors which could greatly aide in the educational process. An analogy might be a comparison of men and women. Most would agree that men and women are "equal" with neither being better or worse than the other, but there are undeniable and obvious differences. These differences also change with culture and time. Men and women have different physical attributes, different chemistry, and often different emotional reactions and thought processes. Recognizing these differences does not make one sex less worthy. It only provides information which may be used in approaching an individual. There are also different and changing roles for men and women. In the early part of the 20th century, few women held salaried jobs, and those which were available to women were generally low paying. In the latter part of the 20th century, women are found in nearly every facet of the job market, and though their pay still has not reached that of men in comparable jobs, it has made tremendous gains. Women have nearly assumed an equal role to men in work situations, though they still have attributes and characteristics of women. They are equal but different.

The questions of sames and differences is not an easy one. There is complexity in the conscious and unconscious factors dealing with gender, race and culture. There is also the interaction of these elements along with the political and economic pressures involved. Said (1993) deals with some of these issues, though not specifically for Native American communities.

Using characteristics of Native Americans to label, categorize, and stereotype for the purpose of denying access to education or work is indeed an unfair practice. *However, studying, observing, and utilizing differences and strengths to help give access to work or education is appropriate.* Ethnic minorities have different genetic and cultural backgrounds which can allow for differences in approach. These are not deficiencies, only differences. The problem occurs when those with differences are forced into a schooling situation which is developed for other traits or assumptions and which is inflexible. By recognizing ethnic and cultural differences, we, as teachers, can provide more flexibility and adapt the "system" when necessary.

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Chapter 6 Main Ideas

Native American students have differences from non-Native students.

These differences can be used to adapt curriculum and classroom procedures to empower Native American students in the educational system.

Differences come from culture, language, and values and can be used by schools as strengths rather than as deficiencies.

Successful programs insist on excellence of student performance and productivity.

Chapter 7

Learning Style/Brain Dominance[1]

Learning style is the place where the business of schools happens. The interface between student and learning is what education is. Awareness of learning styles and brain dominance is a useful tool for students and teachers alike. It is helpful to know our own strengths for dominance and style and our abilities to interface with others in their dominance and style. However, care must be taken not to use this awareness as an excuse. All people can and do constantly deal with situations which are presented in ways different from their most comfortable dominance and style. We learn to adapt, to get along, to modify, to compensate. We take situations and people which come to us in our non-preferred dominance or style and learn from the situation or get along with the people. We cannot say "I couldn't communicate with him/her because s/he is not in my learning style," or "I couldn't learn that because it was presented actively and I am a reflective learner." We have to deal with the world as it comes, be we teachers or students. However, the more we know about our and others' dominances and styles, the more we can ease the interaction.

In building a case for looking at learning styles, it helps to look at the past and present state. Numerous reports have indicated that the education of Native Americans has been a dismal failure (i.e. Kennedy, 1969). These reports indicate low scores for Native Americans on all measures of academic achievement (Bishop, 1988 and Ingrassi, 1987). The Native American success rate in completing high school is far below the national average, the percentages entering colleges are far below averages for other ethnic minorities, and the school dropout rate far exceeds national averages (Platero, 1986 and TCI, 1987, Arizona. n.d.). In short, the schools are not doing well at educating Native American students.

In Arizona, the problem is worse for educational systems on the reservations than it is for those educational systems off reservations. The dropout rate is even higher, the test scores are even lower (Rhodes, 1989).

Curriculum has received some criticism, particularly on the reservations, as being ineffective for Native Americans (Reyhner, 1988 and Gilliland, 1988). However, to try to lay the blame for low test scores and high dropout rates solely on the curriculum is not realistic. Curriculum, in the largest sense, does play a key role, but what is done in schools is only a part of that. Since the graduation skills on

and off the reservation are similar, generally dictated by the states, the assumption is that materials, classroom expectations, and techniques must be similar. There may be some problem with part of these assumptions. Curriculum should be designed to student needs. With standardized curriculums and state textbook lists, there is little room for individual, let alone cultural, differences in students.

Most textbooks and curricula on the reservations are derived from the same approved lists as are used off reservations. The teaching techniques and methodologies are likewise the same or very similar. The apparent assumption is that the Native American students are similar enough to the populations off the reservations to use the same teaching styles. Herein may lie a problem.

If the teaching techniques and methodologies are essentially the same on and off the reservations and the students are not learning as well in one environment as in another, then it would be appropriate to look at the learning styles of the students. If they are similar, then similar methodologies should work, and we will have to look elsewhere for possible explanations as to why reservation Native Americans do not do well in schools. If the learning styles are different, then we may need different teaching methodologies and styles to gain the same level of learning with reservation Native Americans as with off-reservation students.

Ross(1982) writes that Native Americans are predominantly right brained, but provides no research base, while Crisjohn and Peters (1986) feel that Native Americans follow the norms for brain dominance.

In doing this study, I tried to determine the brain dominance and learning style of Navajo and Hopi students living and attending school on the reservations of Northern Arizona. I was able to also gather information on Anglo, Navajo and Hopi adults teaching in reservation schools and on Navajo and Hopi adults not teaching in schools. These results are compared with each other and with norms for the general United States population.

Four hundred twenty-four subjects on and near the Navajo and Hopi Reservations were tested for brain dominance and learning style. I used two tests, The Hemispheric Mode Indicator (McCarthy, 1986), which was used to determine brain hemispheric dominance; and the Learning Style Inventory (Kolb, 1985), to determine a learning style quadrant based on the subject's declared perceptual and processing methods.

* * *

Table 1
Brain Dominance by Percentage

	Left	Whole	Right
Navajo Students	20	18	61
Hopi Students	17	18	64
Navajo School Adults	54	10	37
Hopi School Adults	29	24	48
Anglo School Adults	45	5	50
Navajo Parents	44	13	44
Hopi Parents	61	11	25
Norms	49	8	43

* * *

Figure 1
Learning Styles Model (McCarthy, 1987)

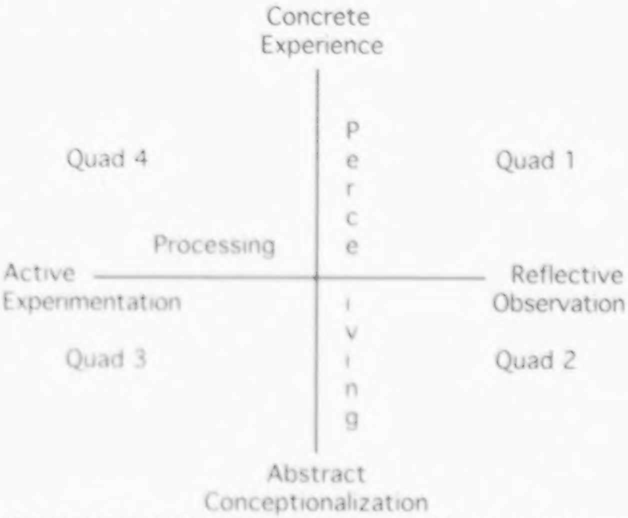

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Table 2 shows the percentages of each subgroup which fall into each category of learning style.

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Table 2
Learning Style Quadrants by Percentage

	Quad 1	Quad 2	Quad 3	Quad 4
Navajo Students	40	25	6	29
Hopi Students	54	24	8	13
Navajo School Adults	43	43	6	9
Hopi School Adults	40	24	16	20
Anglo School Adults	21	31	16	32
Navajo Parents	29	24	14	33
Hopi Parents	31	37	9	23
Norms	23	31	17	29

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Differences from the norms in either brain dominance or learning style, or both, are significant for all Navajo and Hopi subgroups, with only the Anglo teachers being near the norms. Hopi students are more like Hopi teachers, but not like their Anglo teachers. Parents from the two tribes are not significantly different, nor are the Navajo and Hopi adults working in schools. Navajo parents are more like the students and less like the Navajo adults working in schools, particularly in learning styles. Hopi parents differ significantly from students and Hopi school adults in dominance but not so much in learning style.

Whole brained subjects were found much more frequently in the Native American population than in the Anglo reservation population or in the norms.

The Anglos working on the reservation appear to be very close to the norms, while all populations of Native Americans differ significantly from the norms either in brain dominance alone or in both dominance and learning style. This would imply that there is indeed a difference between Native Americans living on reservations and the general public living off reservations.

Schools are generally oriented around activities which are appropriate for left brained, quadrant 2 learners (McCarthy, 1987). These types of activities are generally linear, sequential, and involve organizing, listing, and reporting with little concern of the relationship of the specific activity with a larger whole. Most Navajo and Hopi students tested as right brained and quadrant 1 or 4 learners. This would imply a mismatch between the teaching style of the school and the learning style of the students.

This mismatch is compounded on the Navajo Reservation by the Navajo adults working in the schools, who match the traditional schooling situation by being strong in left brain dominance and quadrant 2, but they are very unlike the students. The implication is that the Navajo teachers' instinctive way of learning and teaching is not the natural way for Navajo students to learn. The teachers are trying to follow a specific sequence of activities in order to build a whole from parts, while the student prefers to learn by first understanding the whole, and then analyzing its parts. The results could be miscommunications, misunderstandings, frustration, and eventually dropouts. Navajo students would have more commonality with Anglo teachers, according to the results of this study, than with Navajo teachers.

My hypothesis as to why Navajo teachers and aides are so different from Navajo students is that they have self-selected. That is, those who like school and who are compatible with it, become teachers. The schools for Navajos, at the time the present day teachers attended, were mostly quadrant 2 schools, so those Navajos who were quadrant two learners tended to like school, stay in school, graduate and go to college, and become teachers. Elizabeth White (Qoyawayma, 1964) discusses this in her book, though for a Hopi. They then returned to teach on the reservation. Those Navajos who were dominant learners in another quadrant did not go into teaching.

Freire (1981) talks about situations in which members of an oppressed society become trained by the dominant society and take positions of power in which they perpetuate the oppression on their own people. Examples of situations which are similar to what Freire describes are apparent in various governmental entities on reservations. Examples of Native Americans imposing a "foreign" system on their own people through enforcement of bureaucratic policies meant to perpetuate the system rather than help the people are often seen. The possibility of similarity in

Native American education would be frightening. Navajo teachers and paraprofessionals do have the interests of their students in mind, of course, but they *are* implementing a system from outside rather than utilizing their own natural and cultural awareness to provide a system which might be more natural, appropriate and successful for their students. It is much more encouraging to think of these Native American educators as gradually changing the system to one more sensitive to the needs of the students it serves through their own natural cultural awareness.

Hopi students would appear to have much the same mismatch with schools as do Navajo students. Their situation is moderated, though, in that the role models, Hopi teachers and aides, are more similar to the students. The Anglo teachers are more unlike the Hopi students. Where Navajo students would likely have more communication problems and frustration with Navajo teachers and aides, the Hopi student would more likely have those problems with the Anglo teachers. Navajo parents would likely have fewer communications problems and frustrations with Navajo students than would Navajo teachers and aides. Hopi parents would tend to have more communications problems and frustrations with Hopi students than would Hopi teachers and aides. In other words, it is likely that Navajo students use parents and non-school adults as role models where Hopi students use Hopi adults working in schools more than adults from the home environment.

Schools are generally concerned with linear presentation of materials in a passive rather than active format and in "scope and sequence" as an important concept in curriculum development. In contrast, Tables 1 shows that 61% of Navajo students and 64% of Hopi students are right brain dominant and would need a more global and intuitive approach to subject material. Table 2 indicates that, 69% of Navajo students and 67% of Hopi students take in new information through concrete experience (quadrants 1 and 4) rather than through abstract conceptualization. The schools, though, tend to utilize textbooks and lecture to develop abstract conceptualization. The concrete, wholistic, feeling aspects of curriculum are minimized. The results of this study would indicate that a modification of school curriculum would be appropriate for Navajo and Hopi students, not from the standpoint of content, but rather from the methodologies to be used and the awareness of the larger concepts being developed in students' minds.

It is also interesting that 65% of Navajo students and 78% of Hopi students appear to process information passively, through reflective observation (quadrants 1 and 2). This would imply that they need increased incubation and rehearsal time for ideas to develop and to make new information correlate with previously known information. The "monkey see, monkey do" or "watch me and do like I do" procedures which are used in traditional schooling would be less appropriate than a process of "watch me and try it when you feel comfortable with it." The immediate determination of students' mastery of material may be less appropriate than a determination at a later time of the usefulness of the material in a context.

It is important to understand that this discussion centers around statistics and averages, not individuals. Even from the figures, the schools fit 20-40% of Navajo students very well. There are 20% of Navajo students who were left brained or whole brained leaning left, with another 18% who were whole brained. There were 25% of Navajo students, who tested as quadrant 2 learners, who are probably comfortable with the traditional school procedures. These figures correspond closely with the Navajo dropout figures as reported in the Chinle Demographic Study (TCI, 1987). That study shows that there is approximately a 70% dropout rate among Navajo students, leaving 30% to be successful in schools.

The usefulness of any research is to shed new light on a problem and suggest ways of beginning to forge a solution. First, it appears that the teaching style of the schools, as well as of teachers in the schools, does not match the learning styles of the students. Schools are generally centered around left brained activities, focused on sequential, passive perceiving and reflective processing (quadrant 2) (McCarthy, 1987). Since we tend to think, perceive and process in our dominant style, it would follow that we would tend to teach in that style, *unless the style of the system predominates.* We teach either as we were taught, or as we learn best. Thus, we would tend to teach either in quadrant 2 or in our own predominant quadrant (this study indicated mostly quadrant 2 or 4).

Our dominant style is not an insurmountable problem, though, since it is the central assumption of the 4-MAT teaching system that all learners *can* learn in all four quadrants and all of us *can* teach in all four quadrants. It is simply easiest and most comfortable for each of us to learn in our dominant quadrant. If properly informed and motivated, we can each assume the characteristics of other quadrants and function quite well (McCarthy, 1986 and Kolb, 1983). In learning outside of our dominant quadrants, we learn to be tolerant of other emphases and effectively translate the material into what is more meaningful for us. In teaching, we can make an effort to adapt to the students' needs and develop techniques which allow them to learn better. We can emphasize what they feel is necessary for understanding, and slowly develop the transition techniques necessary for fuller communication and understanding between the quadrants.

Those of us who do not have the same dominance or quadrant as our students and who may thus inadvertently miscommunicate and misunderstand, can, with training and patience, develop good teaching methodologies which will allow our students to learn very well (Jenkins, 1988).

Once we become more sensitive to the learning styles of the students, we can adapt the curriculum, particularly the implementation of the curriculum more to student needs. This may involve some changes in materials of the curriculum, but often is limited only to methodologies.

There have been some attempts to help teachers with appropriate teaching techniques for Native American students (see Becktell, 1986; Deyhle, 1983; Kleinfeld, 1975; Marashio, 1982; Polacca, 1962; Rhodes, 1988; Swisher & Deyhle, 1987). Numerous other books and articles can give insight into Native American thought processes and will assist in the development of appropriate teaching strategies (see Cattey, 1980; Feralla, 1984; Kleinfeld, 1973; Tafoya, 1982).

It is important to remember that our students should not be taught in their dominant mode all of the time. In actual practice, we all come into contact with situations demanding the use of different learning styles. In order to survive in the real world outside of schools, we need to be able to use all quadrants. Therefore, a system should be developed for schools in which new material is initially presented in a student's dominant style, but presented and used again later in other styles. The 4-MAT model advocates that a teacher develop an approach for any lesson which lets students spend about 25% of their time in each of the four quadrants. There is time for brainstorming or discussing possibilities, for listmaking and organizing, for actively doing or manipulating, and for incorporating the results into a larger framework. That way, each gets to utilize their dominance for a part of their time, while developing their coping strategies to develop their abilities to deal with situations outside of their dominance for the rest of the time.

Even more helpful will be the future development of appropriate teaching strategies based on research of learning styles and analysis of successful practices. It is likely that specific teaching strategies could be developed from the results of this study, based on utilizing the strong perceptual and processing styles of Navajo and Hopi students. An analysis of student progress before and after use of such strategies, or analysis of a test group against a control group would give information as to whether this was an appropriate path to pursue.

Learning styles awareness and usage is only a part of a solution to the educational problems of Native Americans. There are untold additional elements. Some of the other elements are discussed in later chapters. The relationship of schooling to success for Native Americans, the comparison of men's and women's success on and off reservations, the cultural/political underpinnings of Native American life, and much more become factors in the learning environment. By allowing students to utilize the strengths of their own learning styles, we may be able to open a door which will allow development which would otherwise be stifled.

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Chapter 7 Main Ideas

Native American students (Navajo and Hopi) tested as significantly more wholistic learners than the non-Native population.

While there are many Native Americans who process information reflectively, there are also many who are active processors.

The learning styles of the students tested were quite different from the model of schooling which insists on scope and sequence, building each step of the learning process on full understanding of the previous step. Rather, students would be more comfortable with a model which allowed understanding of the end goals while developing the processes along the way.

All students can learn in any style, but are more comfortable and natural in some than in others.

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[1] Much of this chapter is adapted from my article "Measurements of Navajo and Hopi brain dominance and learning styles," in the Journal of American Indian Education, 29(3), May, 1990. Additional detail can be found there.

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Chapter 8

Wholistic Learning[1]

The previous chapter outlined some research indicating that over two thirds of a sample of 389 Navajo and Hopi subjects tested was wholistic in their perception of new information. This chapter will indicate how and why a wholistic approach to teaching/learning for Native Americans can work.

Wholistic Teaching/Learning

In spite of studies by Ross (1982) and others which indicate that Native American students learn and mentally function in a somewhat different manner than do Anglo students in school, there has been little effort to develop a different learning/teaching methodology. Perhaps we are not clear on the reasons for the difference or the possibilities for change in the educational system. Wallis (1984) pleads for a wholistic approach for Native American students, but we have a greater need to develop our rationale and procedures to effect changes.

Current Status of Native American Education

Even though there is a certain percentage of Native American students who succeed quite well through the current educational system, the formal educational process for Native American students has been largely ineffective, as has been demonstrated repeatedly by research studies (Indian Education, 1967-8; Kennedy, 1969). The dropout rate of Native American high school and college students is tremendous as compared with the general population, and the percentages of college students, college graduates, and professionals are likewise much smaller (Szasz, 1974; Coleman Report, 1966; Saslow and Harrover, 1968; Owens and Bass, 1969; TCI, Inc. and Educational Data Systems, Inc., 1987). There are several programs specifically designed to encourage native students to enter fields which will lead to professional degrees and training such as mathematics, science, medicine. However, there are few Native Americans pursuing careers in any of those fields (Navajo Department of Higher Education, 1984; Selenger, 1969).

The Navajo tribal scholarship program supports hundreds of Navajo college students each year, but only about 10% of those supported graduate from college, according to tribal figures (Navajo Department of Higher Education, 1984). Research is sparse on this subject, but from anecdotal evidence, it appears that many of the Native Americans who succeed in higher education, and who graduate and become successful in a career, have been reared in town rather than on the reservation.

Need for Change

As I sought reasons for the lack of success of native American students in higher formal education, even in upper elementary grades and high school, and in their pursuit of professional careers, several possibilities became apparent. Contributing factors include language problems, lack of proficiency in English, cultural difficulties in adapting to a campus situation, outside interests, lack of motivation toward education or career, lack of desire, lack of appropriate career models, and more. Some of these factors may play a part and others are transparently absurd. I found little conclusive research to support any of these possibilities and some research which indicates that Native American students do at least as well as the general population in school through early grades (Indian Education, 1967-8; Saslow and Harrover, 1968). Though their scores tend to fall off in higher grades on achievement tests, they continue to score well on nonverbal tests (McCartin and Schill, 1977; Havinghurst, 1957: Bass and Burger, 1967-8; Dennis, 1942) such as tests of creativity, originality, problem solving, and manipulative tests. There is something else, though, which may be more important. I propose that a major contributing factor is the difference in thinking process necessary for survival on reservations and that required for success in schooling.

Native American Learning Style

There are several observations which appear to indicate a different way of thinking for Native Americans than for the population in general. One of these is the Native American means of telling a story or telling about a trip or other event. Often the process of telling such a story will take several hours. The emphasis is on detail more than on major points or even on chronology. There is usually some attempt at proceeding from the beginning in time toward the end, but if a detail is remembered out of sequence, it is put in. The details, the context, the surroundings and the feelings - the whole picture - are just as important as the main points.

If this observation of the story telling process is accurate, then it would follow that summarization abilities and probably note-taking abilities of Native reservation students should be weak. Both of these processes involve synthesizing a situation and determining main points. Indeed, high school teachers indicate that Native students at reservation schools are very weak at summarizing. One student verbalized his frustration at the process by saying "There are no main points. They don't make any sense without all the rest." These students have similar frustrations in trying to outline. The process demands a linear process rather than the broader, more wholistic understanding with which the students are comfortable.

A second observation is of the presentational or group argumentative process. When a speaker is trying to make a point or influence listeners, s/he will usually begin with a description of the argument (i.e. they need money for a new school building), then proceed to explain one element or the ramifications in one direction (i.e. the advantages to students). S/he will then come back to the explanation before departing to explain another element (i.e. increased opportunity for community use). S/he will continue trying to explain as many ramifications of his/her proposal as possible, including negative ones such as decrease of grazing land, other possible uses for the money, etc., but always returning to the original point. The process would look like a circular or spiral process rather than a linear one. The relationships to other points (i.e. students, social life, land, cattle, water, increase of outside influence, jobs, funding sources) become as important as the main idea, but focus is always returned to the desired direction. In turn, most often listeners will not comment or question until they fully understand and feel comfortable with all aspects of what is being proposed. If they are in disagreement, they may remain quiet, feeling that they do not yet fully understand the proposal, or they may voice their opposition by following the same process. Overall, this procedure is very time-consuming and involves much less "give and take" than does a comparable process in an Anglo group.

This second observation ties in with the idea that Navajos must fully understand something and have thought of all aspects before they will act on the information. The Navajo learning process is outlined by Becktell (1986) as having four components (see Figure 1). She shows the comparable process for Anglos in Figure 2. Where Anglos have developed a learning style based on learning from "trial and error," Navajos learn before they try and need "trial with success." Anglos learn easily from failures, where failures set back the learning process for Navajos (Becktell, 1986; Werner and Begishe, 1986).

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Figure 1
Navajo Learning Process

Observe ———Think
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Understand/feel————Act

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Figure 2
Anglo Learning Process

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Act
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    \
      \
       Observe/Think/Clarify————————Understand
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This second observation lends itself to the philosophical idea that the whole is more important than the parts, even though it is made up of the parts, a whole language or Gestalt idea. The relationships are important in an idea, as in a family. The family and clan relationships are as important as are relationships of ideas. The parts can be studied, but only in relation to the whole. For example, a painter would understand the whole of a painting before beginning. In doing a gymnasium-length mural for Shonto Boarding School, a Native painter first spent some days simply looking at the blank wall. He then proceeded by applying all of the red paint to the sections which were to be red, from one end of the mural to the other. Next came browns, then blues, and so forth. The shapes of what was being portrayed did not become apparent until well into the process. All of this was done without a paper sketch or sketch on the wall. The artist had the whole picture in his head and simply transferred it to the wall, in the same manner as do Native rug weavers, basket makers and potters.

In this way of thinking, everything becomes a part of everything, with fewer discrete categories for observation or segregation of either ideas or people. This may lend itself to a more wholistic observational technique, whereas the Anglo process of categorization lends itself to a more linear approach. Thus the Native American sees little or no differentiation between religion and daily life, has little trouble with anthropomorphism of inanimate objects, practices wholistic medicine, and follows numerous other practices indicating that his/her segregations of ideas are fewer and different. The Anglo, on the other hand, sees medicine as separate from nutrition, and reading as separate from science or social studies or math. The Anglo compartmentalizes by subject rather than seeing them as a part of the relation to the person.

In the group process, following the second observation, there is traditionally no decision made until there is consensus. Voting is not an appropriate process. The conclusion will come when it is time, when all of the relationships and ramifications have been explored, and when it feels right. Following this logic, the decision must respect everyone, and the voting process would rush some people and alienate others who could be helpful later if they agreed.

These observations must also be tied in with the developmental expectations for children in the culture. Children are given responsibility at a very early age. They may be responsible for younger children, for herding sheep, helping with housework, cooking or other chores. The situation is more like frontier rural life than like contemporary urban life. Children deal primarily with other children, either learning from older peers or teaching younger ones. Relations with adults are less frequent and more formal. The teaching and learning functions, then, become both essential to cultural expectations, and at the same time pragmatic rather than formal. Children learn how to keep others happy and what works by observation and by asking each other. Perhaps they learn more as adults do than as we think children do.

Teaching Styles

So far I have attempted to show that there is probably a different observational and thinking process for Native Americans raised on the reservation than for Native Americans and non-Native Americans raised off the reservation. These processes would affect the students' learning processes. Before exploring that, though, we must first rule out the possibility of teaching style differences on and off the reservation.

Most teaching on the reservation is very traditional in educational terms, utilizing mostly lecture/discussion techniques (though with only limited discussion in the more remote settings), utilizing mostly standard, state-adopted textbooks and workbooks, and utilizing mostly traditional approaches and assignment practices as learned for non-reservation urban school situations. The basic process is to "tell them what they need to know, then ask them what I told them." This teaching style is similar to most general population situations, though the classroom participation is somewhat less active both verbally and physically than it is off-reservation. Recently, the Whole Language approach has made changes in this process in some locations. Educational innovations usually are slow to be implemented on reservations to the point that even computer use in the classroom is not in some schools.

Basically, the teaching styles on and off the reservation are similar, so, if the premise of a teaching/learning style conflict is at all valid, the solution may lie in the students' learning styles. As educators, we most often assume, as do most textbooks, that all students learn in basically the same way. We assume that the "student learning process" is basically similar to the way we learned (or more likely, the way we were taught) when we were that age. "It worked for us, so it must work for everyone, " is the thought. This must be at the least a very egocentric assumption. Current research suggests differences in visual, aural, and tactile learners as well as differences between left and right-brained learners (Vitale, 1982). Research also indicates that the Native American population is more right brain dominant, more wholistic, and more tactile than the general population (Ross, 1982; Rhodes, 1990). Note that these are all areas in which our educational system is weak. The case for learning/teaching style dichotomy is strengthened.

While it would be unfair to argue that all instruction should be compatible with the learning style of a student, it surely can be argued that by understanding how a student learns most naturally, an instructional approach could be developed with a much higher likelihood of success. In trying to develop such an instructional strategy for Native American students, it would be appropriate to first look at how they learn in their own environment.

Learning Environment

First, for all of us, there are at least three educational environments. The first is the formal, in-school educational environment. That is the one in the classroom, with the teacher, the one we are all familiar with and think of as "education." A second environment, though, is the formal, out-of-school educational environment. For Anglos, this will include religious training—a formal, non-school situation, but much like school. It could also include stories and training from grandparents and elders. For Native Americans, this would involve religious training, but could also include the learning of clan and society legends, relationships, stories, etc. The training would be from an elder or more knowledgeable person, but may or may not be in a formal setting. The third environment is the informal, out-of-school educational environment. In this one, we constantly learn from our experiences, from our friends, and from our family. This is how we learned to talk, to walk, to ride a bike, to observe our environment, etc.

How, then, can we make the learning process in these different environments more similar, and use the processes from the informal situations to facilitate learning in the formal situations? It is most likely that we learn most naturally in the informal settings, by our observations and from family and friends. The characteristics of this learning, for Native Americans, is somewhat different than it is for Anglos. Native Americans spend much more time watching and listening and less time talking than do Anglos. If they are interested in something they watch how it is done, they inspect the product, they watch the process, they may ask a quiet question or two. Then they may try it for themselves, often out of the public eye. They are their own evaluator to determine whether their effort was successful or needed improvement. When they feel comfortable, they will show what they have done to someone else, usually someone they trust. The help and critique they then get is constructive and non-threatening.

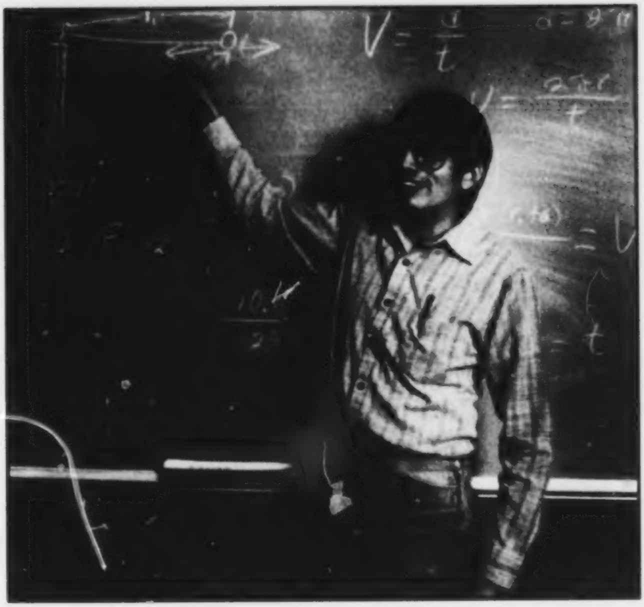
An example would be the boy who was learning to ride broncos for rodeo. He first watched his father break horses for several years. Then he went where he could be alone with a saddle and a barrel and practiced. Probably he found a way, maybe with help from brothers or uncles, to support a barrel with ropes between two poles, and tried that. Later he tried horses, still without an audience. When he felt comfortable, he asked his father to watch. He was successful in staying on the horse for a short time, but then was thrown. His father smiled and complimented the boy and then asked him to watch while the father got on the horse and demonstrated again. The father didn't tell the boy what was right or wrong. He asked him simply to watch again. The process would then continue, with the boy trying more, watching more, and refining his abilities. The attitude between the father and son would be one of positive development and improvement of something which was already successful by further observation and refinement.

The emphasis throughout this process is on the student's understanding the process and feeling comfortable with it before trying it and "risking" himself. The emphasis is on success rather than on learning through failure. The assistance from outside is on improving a success rather than on turning a failure into success.

The learning style has elements of visual and of aural learning, but the most actual, individual learning takes place (in private) kinesthetically, through actually trying to do the process. Usually this takes place at the individual's pace and cannot be rushed, since understanding and comfort are essential.

Implications for the classroom are obvious. Projects, individualization, peer teaching, reinforcement, non-threatening evaluation, structured play, incubation, and private practice time would all be appropriate practices. Students would gain by having an idea about or understanding of a whole idea or concept before beginning detail work on a part of it. Perhaps less teacher direction and more assistance would be appropriate. Perhaps we could allow for more movement, for freer time limits, for spaces and times for individual experimentation. We teachers would concentrate, then, on quiet praise, observation, and guidance.

Also, we could utilize a more Wholistic approach. There is much confusion about the term "wholistic" in education, but in this context it means a fostering of a broader base and context for understanding, a multi-level approach which encourages understanding of many aspects at the same time and of the interrelationships involved, which, in turn, encourage involvement, ownership and commitment. A technique for developing this wholistic approach could be to encourage the dissolution of subject area boundaries. A few basic concepts which pervade all subjects could be used as the central educational elements from which understandings could be developed. These basic concepts would be introduced at the beginning of the educational process and would provide much of the foundation of familiar material and concepts from which to base new observations and discoveries. Development would then be circular or spiral, constantly returning to familiar areas and then venturing into new ideas, much like the presentational process used in Native American community meetings. Instead of having the educational process revolve around subject areas, it would revolve around student perceptual processes.



In searching for such cross-disciplinary concepts, four were borrowed from the fifth grade social studies curriculum, Man: A Course of Study (1968), which seem to be appropriate for developing the processes in all subjects. These are the concepts of

1) **The same and different**. This becomes a means of comparing, classifying, and observing in all subjects and can be used with physical objects and with social situations. It is the foundation of math, science, and social relations, and is the basis for patterns.
2) **Cause and effect**. This is another observational tool which can be used to determine causalities and probabilities in most subject areas of study. This implies that any occurrence has a cause and any action will have an effect. For example, a cause (dropping) will have an

effect (breaking) and an occurrence (fight) must have had a cause (provocation).

3) **Structure and function**. This develops the ideas of natural laws based on needs of an organism or a culture and also pervades all subjects. It implies a relationship in which structure (i.e. leg) enables function (i.e. walking, running, standing, kicking) and the need for a function (i.e. rapid travel) demands structures (i.e. bicycle, car, airplane). In the social environment, a structure (family, town, club) enables function (security, organization and planning, trips and interests). Alternatively, functions (international trade) demand structures (governments).
4) **Patterns**. This examines recurrences, and studies their effects on man and nature.

If concepts such as these four were introduced and developed throughout schooling, a more wholistic understanding could be developed in all areas, and the development of any subject area could begin from familiar concepts in which students felt comfortable. Encouragement could then be made and success would be more likely for experimentation, observation, and development of new ideas and relationships based on firm (and wholistic) understanding. The classroom procedures would then be to encourage and develop familiarity utilizing a goal orientation and project orientation process. In a question of content vs. process, the procedure of the teacher would be to let the content develop from the process rather than the opposite.

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Chapter 8 Main Ideas

Native American students learn best when they can understand the goals and help in developing the processes to attain the goals.

Native American students tend to need to understand ideas before utilizing them. This compares to another style of learning from using (and misusing) an idea to develop the understanding and learn from mistakes.

Native Americans learn best through successes rather than from mistakes.

Positive reinforcement, non-threatening practice situations, peer tutoring, and group processes are all likely to increase learning for Native Americans.

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The following three chapters deal with the philosophical/psychological/motivational aspects of Native American education. They present many ideas which are as pertinant off reservations as on. While motivation discipline are most often approached with a deficit theoretical base, it is important to consider that there are cultural/values factors there too.

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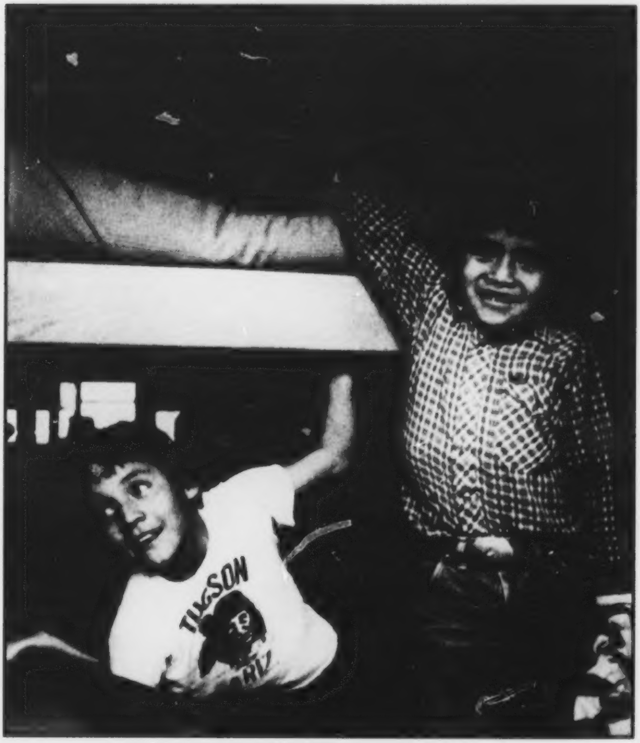
[1] Much of this chapter is from my article, "Holistic teaching/learning for Native American students," in the Journal of American Indian Education, 27(2), January, 1988. Additional detail can be found there.

Chapter 9
Motivation/Discipline

Motivation and discipline are two sides of the same coin, one being positive and the other negative. Looking at things one way, if we motivate adequately and appropriately, discipline takes care of itself with little or no need for intervention from teachers or administrators. Looking at the other side, if outside discipline is necessary, the student was not adequately motivated. Self-discipline comes from self-motivation, which may come from a teacher shaping the learning environment. This oversimplifies, but has a lot of truth in it.

In order to motivate Native American students, we have to appeal to their inner sense of belonging and understanding. They need to feel that participation is in not only their best interest, but also in the best interest of their family and/or friends. That is why projects work so well. The group is determined and it becomes obvious that participation will result in the group attaining its goals and in group approval. Since students see themselves so much more strongly than do Anglos as a part of a larger group, the influence of the group is much stronger. That is not to say that individual members of a group will deliberately try to control a member. Generally that will not happen. Rather, all the members of the group will try to "fit in" to the group, getting recognition from other group members, and in turn, giving back to the group as a whole.

Little Soldier (1989) indicates that the dignity of the individual is essential to most Native American cultures. That dignity is reduced by direct criticism. Pepper (1985) encourages indirect criticisms and indicates that harsh discipline may damage a child's self-image. He goes on to list inappropriate procedures such as using facial and other gestures, ignoring, ridiculing, shaming, withholding praise and attention and using peer pressure. Polacca (1962) points out a factor which we must consider. She indicates that due to the cooperative nature of the culture, some Navajo students are hesitant to give a correct answer when questioned to avoid "showing off" before peers who may not know the answer or be less comfortable in English. Swisher and Deyhle (1987) indicate that public verbal displays of competence do not provide an accurate gauge of student knowledge. They feel that the cooperative learning method of the traditional Native culture and the competitive classroom environment put students in conflict.



In terms of learning, Native American students will easily learn what they think is appropriate and what fits into their reality. Younger students will make valiant efforts to try to please their teacher. Older students are more inclined to make those efforts to please (or amuse) their peers. In either case, though, it is much more likely to foster learning if the students can easily understand how the current learning fits into a larger picture which they accept.

Discipline, in the same manner, has to be developed around a similar larger picture. With Native American students, as with all students, the best discipline is that which is internal. Native Americans have tremendous self-discipline in life situations. They plant crops in very harsh environments, herd sheep in those same environments, participate in exhausting ceremonial activities, take care of young children and older relatives, do chores and help uncles and aunts in their tasks, all mostly without supervision or external reward. Getting them to utilize these powers in schooling situations will greatly reduce the necessity for external disciplinary procedures. The goal in this endeavor would be to have students understand and accept why an activity, project, or subject is necessary; realize their place in the learning process being undertaken and in relation to the activities of others; and assist themselves and the group toward increased learning or knowledge.

There have been numerous behavior modification program utilized on reservations to try to get students to "pay attention" in schools. These have generally been relatively successful in the short term, but dramatically unsuccessful, and even damaging, in the long term. Some models used in Head Start, Follow Through, and beyond emphasized the rewards for positive behaviors so much that children learned not to do expected chores at home unless they were "paid." The best, most appropriate discipline for Native American students demands an internal rather than an external locus of control.

It may be that underlying assumptions about cultural interrelationships used in behavior modification are not appropriate for Native Americans. Scollon and Scollon (1981) compare aspects of power and distance in Athabascan and Anglo cultures, showing that there is ample opportunity for misinterpretations. They also show that presentations of the self and control of situations presents a dilemma to Athabascans in Anglo situations. In a social system which has a high degree of interpersonal distance, the role of others in maintaining discipline is significantly different than it would be in an Anglo society in which there is less interpersonal distance. In the Athabascans, others would not directly tell a miscreant what to do, but the internal pressures for conformity would be much higher.

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It is interesting to see how discipline is handled in the home. In Navajo and Hopi cultures, where the homes are very small, generally without separate rooms and with many people living in a small space, the discipline generally comes from an Uncle who lives elsewhere. That allows the people living in the household to remain in harmony and support each other (even if one of them called the Uncle). There is also much joking and teasing between an uncle and his niece or nephew, which lightens up the discipline which is needed. The idea is to get the child to do what is required without having to call the Uncle in, to get the child to internalize the need for discipline.

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Navajo/Hopi Discipline

The culture realizes that the child is a human being with responsibilities and rights in much the same manner as an adult.

The home environment has only a small indoor space. There is not a separate room for children. There are not inside doors. The child cannot save face by going into his/her room or slamming the door.

It is important that the atmosphere in the home be positive, amiable, and supportive of all who live there.

If discipline comes from outside, even though secretly instigated by the mother, the mother can then take a supportive role, telling the Uncle (or, in Hopi, the kachina ogre) that the child is really not all that bad. The child will then work with the mother in the future rather than shutting her off.

The uncle, who has responsibility for both discipline and education, can then take the child away from the home for training and for education, but usually not for discipline. The role of the mother to stick up for her child is important in the discipline process. It helps unify the family.

The uncle will usually discipline only if requested or if he has to. Most of the rest of the time he is teasing or pretending to be mad at his nieces or nephews.

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The idea of internalizing control for motivation and discipline is most important, not only from the student perspective but also from our perspective as teachers. If the responsibility for motivation and discipline is internal, then problems become those of the student or between students more than our problems. If we can stop when situations arise and ask

"Whose problem is it?" before jumping in, a calmer classroom atmosphere can be maintained. This goes along with us being a facilitator in the classroom rather than being the classroom boss and/or source of all information.

Some students need more structure. For those students, our role has to be to provide structure as needed. However, we have to try to transition the students toward internalizing that structuring. As they proceed through life, they will constantly find situations in which there is no outside element providing structure, so they will need to develop it themselves. They will need to develop an internal locus of structure along with the associated internal locus of control.

Another responsibility we have in motivation and discipline is to keep a long-range perspective. Short-range emotions or occurrences seem important and end up taking up our time, but are really not very important except as they relate to the long-term goals of the class, the student and the school. With that perspective, the short-term ups and downs which naturally happen in any classroom situation, even any learning situation, become less significant unto themselves and take their place in a larger, more long-range, curve. As long as the long-range learning curve is going up, the peaks and valleys are relatively immaterial.

You may find situations in which your agenda and that of your students, or even their community, does not match. When that happens, you have to ask yourself if it really matters that the students do, right then, what you want them to do. Can you adapt? Could you compromise? Does it matter who is in control for the moment, so long as the momentum and direction are maintained? We find it difficult to give up any control, but sometimes it helps.

Something which will help us with those discipline or lack of motivation problems is to stop and ask "What might happen if I don't do anything?" and follow that with "Would that be so bad?" We tend to jump in much too soon with students who seem to be discipline problems and for students who seem to be less than motivated. As teachers, we have learned to expect students to be just as excited as we are about something we present in class (even if we are not very excited); to set aside their worries, cares, problems, and everything else; and to do what we tell them. We don't do that ourselves, but we expect them to. If we can stop for a moment, it helps give us a little perspective so that we don't have to be such autocratic managers.

Another way of thinking about the situation is to ask "What is in it for the student? Why should they do what I want them to do? Do they know that? Have I told them? Is it obvious to teacher and student? Have I looked at the situation from their perspective?" Since students are real people, we have to do things which they perceive to be to their advantage in one way or another.

For those struggling with motivation and discipline concepts, Curwin and Mendler (1988) provide a good framework with many specific suggestions.

We often tend to confuse discipline with self-image. In promoting self discipline and enforcing group discipline or rules, it is essential that a student's self-image is not damaged by the process. All involved need to remember two things. First, no person ever does something wrong in their own eyes. In every decision a person makes, s/he uses all the information and experience available at the time, weighs it and makes a decision for action. The process is more or less rational, and under exactly the same circumstances (without the benefit of experience from having made the exact decision previously) would come to the same conclusion and make the same decision for action again. Unless some person or student has a faulty decision-making process, which would be quite rare, an incorrect or inappropriate action decision is simply a learning process to avoid making the same decision in the future. Hopefully, this decision and the consequences will become a part of the "input" for a future "output."

Secondly, no matter what, it is not the student (person) who is wrong! It is only their action. They are still a real, valuable, worthy human being. They just did something which was incorrect in the circumstances. Now they can learn not to repeat the action.

Don't say "You are stupid," or "You are wrong," or otherwise imply a value judgment on the worth of the person. Instead say "That was a silly thing to do," or "That was wrong," or otherwise talk about the action, not the person. In this manner, we will let the student (person) know they still have implicit value, but they need to learn a new action. It is never the student, but the action, which needs correction.

In thinking about lack of motivation and resultant discipline problems, several possible causes become evident.

1. Boredom on the part of students, or teachers, or both
2. A sense of powerlessness on the part of students, sometimes teachers too
3. Unclear limits
4. A lack of acceptable outlets for feelings, usually for students, occasionally for teachers
5. Attacks on dignity

Curwin and Mendler (1988) lay out twelve steps as a foundation for developing student discipline without destroying student self-image. What they have put forward is not designed specifically for Native American children, but it will work better for them than most other discipline programs which have been tried, particularly those based on behavior modification processes.

1. Let students know what we need
2. Provide instruction at levels that match the student's ability
3. Listen to what students are thinking and feeling
4. Use humor (not sarcasm)
5. Vary the style of presentation
6. Offer choices
7. Refuse to accept excuses
8. Legitimize misbehavior that we cannot stop. That is, let the child do something constructive, and

approved, with a behavior the same as or similar to the misbehavior.

9. Use hugs and touching in communicating with kids, keeping local legal constraints in mind
10. Be responsible for yourself and allow kids to take responsibility for themselves
11. Realize and accept that we will not reach every kid
12. Start fresh every day

The responsibility for maintaining good self-discipline and motivation, and the authority to take actions which insure them, need to be present together. That goes for the student and for us as teachers, but also for the classroom community. For Native American education, the sense of group can be a powerful factor in helping students to become motivated and self disciplined. Ask that students be responsible, and give them the authority they need to do that.

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Chapter 9 Main Ideas

Motivation and discipline are closely related.

Native American cultures have internal discipline mechanisms which can be utilized in schooling situations.

Motivation and discipline which utilize internal rather than external locus of control are much more likely to have long term success.

Much which is seen as inappropriate behavior by students might seem less important in a less authoritarian classroom situation. The group pressures are generally strong enough to enforce individual compliance if the group is allowed to set the standards.

Chapter 10
Philosophy/Psychology

This chapter presents a somewhat jaded and certainly quick overview of educational philosophy and psychology. It tries to present the teaching/learning situation from two polar approaches.

In the literature, numerous different constructs for education and curriculum can be found. McDermott (1982) has three categories for understanding schooling, Schubert (1986) has three categories for curriculum orientation, Piaget (1952) has four developmental levels, Egan (1979) has a different four developmental levels, Erikson (1963) has levels of personal-social development, Kohlberg (1963) has six stages of moral development, and there are many more examples. It is obvious that educational theory is really much more complex than will be presented in this quick comparison.

Basically, there are two differing philosophies of learning which affect daily classroom activities and which are currently used in the administration of schools in the United States. They are derived from two different psychological principles and therefore result in differing psychologies of education as well. Most, if not all, educational philosophies and resultant methodologies can be fit under one or the other of these basic psychological premises.

Behavioral

The first philosophy of education is that there is a certain body of knowledge which is pertinent to everyone and there are certain skills required of every child. From this comes the idea that there are appropriate text materials and appropriate teaching techniques which will be successful in transmitting this body of knowledge from us, or the text, to the

student. The student is then evaluated on how well s/he has absorbed the material and how well s/he is able to reproduce it in a testing situation. Occasionally the testing may involve practical application of the material learned.

This philosophy is based on behavioral psychological principles. It defines learning as an action which results in a change in behavior. It developed from Skinner's research in learned responses and Pavlov's experiments with dogs. The idea is that we can train any animal or person by providing appropriate

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rewards. We can train pigeons to play the piano, rats to run a maze, dogs to act as eyes for blind people, etc. The thoughts of the subject are relatively immaterial in this process, since the rewards will shape the desired outcome.

In education, the developments based on this educational philosophy are couched in many titles. Among these are Assertive Discipline, Behavior Modification, Effective Schools, Mastery Learning, Standardized Curriculum, Clinical Supervision. While we, as good teachers, can utilize elements from each of these approaches, if they are used as the basic approach in the classroom, we will adopt the attitude that the students can all learn what we, or the curriculum, want them to learn, regardless of most differences in students. What is appropriate in one location and for one culture is good for any location or culture. The needs of industry, society, and government are relatively well-known and uniform, so the schools should turn out young adults ready and able to enter those fields. The starting point of the students is not important; fitting into the world of work is important.

These approaches also operate on the principle that the way to teach children is to break the subject matter down into small steps which are logical and sequential. This is done in somewhat the same manner as the steps in training an animal. The subject does not need to know what the end result is, so long as we, the trainer (teacher), can give the appropriate rewards at the appropriate times to keep the subject moving in the direction the we want. Eventually the subject will do the whole desired action, whenever we ask. Some training of military personnel follows this model. The purpose of the training is not to encourage thinking, but rather to have the students perform a task efficiently and accurately.

This behavioral approach to education is stepwise, sequential, logical, and teacher-controlled. It provides for education which is relatively quiet, controlled, easily evaluated, and lucrative for textbook publishers. It also does a good job of training responses, particularly in situations where analysis or decision making are not very important.

Wholistic

The second philosophy of education assumes that the important factor in the educational process is the individual student rather than the material. This philosophy dictates that the methods used take into account all factors concerning the student, including his/her environment, culture, family, mood, learning style, etc. to develop an educational situation in which s/he can learn best. The curriculum and materials are utilized to fit the student's needs. The curriculum goals are worded in terms of student mastery of various processes of thinking and problem solving rather than in terms of mastery of materials. This method emphasizes being able to find the material needed rather than knowing the material.

This approach to education is much more difficult to evaluate, since each child in a classroom may be at a different level and may be using different materials. Our job in this method is much more difficult and the record keeping is tremendous. We need to be aware of the individual needs of each student in each area and how that student is able to correlate the various thought processes in all subjects. We are no longer the source of knowledge, but are rather like a coach, guiding students toward their goals.

Some of the developments from this philosophy are Whole Language, Wholistic Learning, Creative Problem Solving, Teaching for Thinking, Language Experience, Reading Across the Curriculum and interdisci-

plinary approaches. The idea is that there are common processes in all learning which cross subject areas, so the learning in the schools should be integrated rather than separated. The subject matter plays a smaller role in this process because it is believed that if students know how to learn and how to find the materials they need, they will be able to develop the specifics they need in a given situation as

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it becomes necessary. They do not need to memorize useless information, and if they know how to think and solve problems, they will be able to survive new situations in an ever changing world in which their field of eventual work may not have even been developed yet. The emphasis is on the learning process rather than on specific materials. Students are expected to learn how to learn, how to follow their own interests and how to become lifelong learners. It is expected that the learning which takes place in school, as a part of the school's educational program, is only a part of the learning which happens in students, so it needs to be integrated into the larger reality of the students' lives.

Comparison

The focus of the wholistic approach to education is the student, whereas the focus of the behavioral approach is the subject matter. Both schools of thought have large, very vocal followings. Both are successful in achieving the goals they set. There are well-known educators who subscribe to either philosophy. Unfortunately, these two philosophies are not easily integrated. Good teachers use elements of both philosophies at different times, but whole curriculums or schools are generally oriented around one or the other. A healthy, informed balance of the approaches is rarely seen.

The behavioral approach will provide quick results as measured on standardized tests, since the curriculum will be developed around what the tests measure. Evaluation of teachers and students will be relatively quick and easy. Curriculum, text books, computer materials, and tests are already developed and approved in state textbook lists, and may be readily purchased from commercial book and materials publishers. The question is, will the student be able to think and survive in the real world after graduation, particularly if s/he chooses to be something other than a cog in the machinery of industry?

The wholistic approach is much more difficult to evaluate. Student work, while showing improvement, may not follow a specific pattern and may be different than the work of another student. We have a much more difficult job in this approach, both in preparing and presenting materials and in evaluating students. The classroom will need a plethora of materials to keep all students stimulated and progressing. The student should develop techniques and thinking abilities which will enable him/her to survive in a world of change. Since s/he will have a significant voice in the development of his/her own specific curriculum, it is much more likely that s/he will be interested in school. The question is, will the graduate of this system fit into the world of work in industry or government? Some say the purpose of the system is to produce "workers and drones." Advocates of this system say it is more likely to produce leaders, aware team players and thoughtful consumers.

What is currently going on in most schools is much like the two paths of Robert Frost's that diverge in a wood. We have chosen one of the paths (skills-oriented and focusing on the "basics"), forsaking the other (wholistic and meaning-based) for another day. As in Frost's poem, "that has made all the difference."

The decision as to which system is appropriate for a school has to rest with the parents and school board of that school. It is a heavy decision, requiring much thought and discussion. It should not be taken lightly, since the possibilities for each child's future success rests on the approach the school takes in developing the perception and thought of the students.

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Chapter 10 Main Ideas

Behavioral approaches to education expect students to react to situations.

Behavioral approaches require external locus of control and will produce rapid short-term learning.

Wholistic approaches to education expect students to take actions toward goals.

Wholistic approaches develop internal locus of control and slower but more long-term learning.

Chapter 11

School Philosophies and Practice

Schools are very conscientious in their efforts at improving education for their students. Schools dealing with Native American populations are no exception. They develop school improvement plans, have in-service training, develop curriculum, etc., in order to improve the educational delivery to Native American students. In spite of these efforts, dropout and low achievement continue to be a problem.

In looking at the situation, it appears that the efforts of school personnel are centered in trying to refine a process which has been rather unsuccessful for years. That is, educators are trying to teach the same subjects as have always been taught, but with more sensitive and more culturally appropriate methods. The purpose of the education, though, remains essentially unchanged. That purpose is the same as it is generally for schools all over the country: to prepare students to be comfortable and productive in modern Anglo society. In short, the educational process is designed to maintain the status quo and prepare students for acculturation.

Even at the school level, though, there is a guiding document, the philosophy, which decries the maintenance of the reservation status quo for students. The school philosophies throughout the reservation are generally quite good, containing high ideals. However, the school curriculum, processes and practices are not in line with the philosophical statements. Following are several examples of directives found in reservation school philosophies, with analysis of school practices which keep the philosophical directives from happening. Some are found directly in school philosophy statements, while others are taken from accompanying school goals and/or objectives.

Students shall develop problem-solving and critical thinking skills.

Schools are places of rules and control. Students activities and even their thoughts are controlled by us teachers, the curriculum, the system. Schedules are followed, bells ring, we are authorities, the principal is the supreme authority. In order to keep things running smoothly, problems are mostly resolved by authoritarian dictate. Schools talk about democracy, but practice autocracy. Students learn quickly that the talk about critical thinking and problem-solving is mostly just lip service. For 13 years or more, their lives will be controlled by what teachers want. Free thinking and decision-making will be talked about, but discouraged in practice. The purpose of schools is not to develop students who have practice in making decisions for themselves, solving their own problems, and learning to deal with the consequences of their actions. Rather it is to maintain the control which society feels is necessary in order for students (Native Americans) to keep their status of being somewhat less than fully-endowed members of society.

With this lack of practice, there is no way that high school graduates can solve the problems they will encounter in adult life or rationally make decisions for themselves. They will not have had opportunities to fully consider consequences of decisions and will not be prepared for the responsibilities of adulthood when the time comes that they have the authority for decision-making.

Schools could truly develop decision-making and problem-solving abilities in students. It would mean gradually transferring the locus of control for student actions from external to internal. Teachers might begin in lower grades to be authorities, setting rules, parameters and guidelines, but as students mature the control would have to become more internal, with fewer rules imposed by outside authorities. Parameters and limits would be discussed and set by individual students and/or by groups. Individual responsibility and social development would take the place of external authorities over a period of years. Students could choose to follow or not follow the dictates of the "system" or of their peers, realizing that they alone would be responsible for possible consequences of their actions. Students would make errors in judgment, but in a nurturing environment, they would learn and have practice so that they would have well-developed problem-solving and decision-making skills before leaving school. They would then be able to contribute positively to the adult society, realistically evaluating what they see and taking positive action in a responsible manner.

Additionally, the autocratic methods of the school are the opposite of the developmental processes found in the culture. In Navajo, as in Hopi, children are respected as people, with needs for attention and with decision-making abilities. In family situations, parents let children make decisions concerning their lives to a greater and greater extent as they grow. The problem-solving abilities and critical thinking skills are encouraged. The children can make the decisions, but also must accept the consequences of those decisions. In the culture, children have the authority to make decisions, the responsibility to make them wisely, and the necessity of accepting the consequences of decisions made.

(Basic Skills)

It is interesting that few school or district philosophies address the learning of basic skills in reading, writing, and mathematics and/or other subject areas directly. That is the reason this area is headed parenthetically. By far, the majority of curriculum activity in all schools is directed to "core" subjects, even though they are not within the scope of the school as dictated by the philosophy. When asked, school personnel and parents are in virtual agreement, though, that they do want their children to have basic skills in the areas of reading, writing and mathematics. They want their children to be able to read a newspaper and a job application, to be able to write a letter and fill out the job application, and to be able to balance a checkbook and do comparison shopping. In short, they want about fourth grade abilities for their students in these three areas.

Students generally are aware that they need these skills at these levels to survive in the world after school. Schools, though, continue their efforts in these subject areas well past fourth grade rather than using the skills learned to develop other areas as demanded by the philosophy. It is interesting to correlate discipline (and later, dropout) problems with the age or grade level. Most problems begin in intermediate grades, when students may realize that they have already accomplished the skills necessary for survival outside of school and may become bored with further study in the same discipline without utilization of the skills in other areas, more interesting to them.

Students shall become self-assured, self-confident, with a good self-concept.

Self-confidence and a positive self-image come from successful experiences. In schools we call attention to failures rather than successes. We give tests to find weaknesses and concentrate our educational efforts on what students cannot do well rather than on what they can do well. Tests are given in order to find out what students don't know. We feel that telling students what is going to be on a test is cheating. They must, instead, guess what we think is important enough to test from the material which has been studied. If they studied the wrong thing and are prepared for something other than what is tested, that is just bad luck. They will fail the test. Their knowledge is not valued. Only what they don't know is of importance to us. Where success is rewarded in schools, it is often done in a competitive manner. Students are judged against each other so that the success of one emphasizes the relative lack of success of others. Conversely, the failures of some gives room for the success of others. Students are not generally evaluated on their own merit, but rather on their standing with others. In such a situation, the emphasis throughout the classroom environment is on failure rather than on success. Self-assurance and a good self-concept is most difficult to develop in such circumstances, even for students who perform well. The concept they develop is not really a "self-" concept but one of comparison with others. Again the locus of control is more external than internal.

Schools can do much more to develop positive self-concepts and self-assurance in students. Portfolio evaluations and narrative evaluations are a step in this direction. Individualized instruction and cooperative learning techniques help also. *When teachers begin to think of students developmentally rather than deficiently, progress will be made.* Students are mostly OK. If they have the abilities to wake up in the morning, dress themselves, and eat, they already have a large portion of the abilities which humans can attain. What we are working with at schools is the last small portion. In that light, it makes more sense to work from students' abilities rather than from their inabilities. When students are successful, they will try harder, learn more, feel better about themselves and others, become more tolerant and respectful, and take positive actions to fix inequities and intolerable situations they may find. Classroom teaching practices and evaluation techniques will need to be rethought, but the result in human resources will be well worth the effort.

The work of the Scollons (Scollon & Scollon, 1981) reminds us that definitions of self-assurance and ways of demonstrating self-confidence are culturally related. We have to be careful that our efforts are sensitive to the more equal interpersonal power concepts and less definite distance concepts in at least some Native American cultures. They also remind us that Native language plays a role in the appropriate development of self concepts.

By looking again at the Navajo and Hopi culture, it is obvious that the locus of control is mostly internal. There is little policing and a lot of instruction, su-pervised practice, cross-age tutoring, and peer assistance. Self-assurance and self-confidence are allowed to grow in a nurturing, non-competitive environment in which the self-concept is never in jeopardy. These techniques are readily adaptable to schools.

Students will become students of learning, will know how to learn, and will become lifelong learners.

We want students to be lifelong learners, but we give them opportunities to learn only in a very few ways. We want them to learn from lectures or books or from "scientific" experiments. They must learn cognitively, and preferably sequentially. They must also be generalists rather than specialists, with attention given to reading, writing, social studies (mostly ethnocentric history), mathematics, sciences, and physical education (mostly sports). If there is time, they may also get a little art, music, drama, shop, home economics, and/or business education. Then we also have to make sure they all have drug education, sex education, computer training, and the various other programs required by legislators and school boards. The students' days are divided up into tiny, meaningless segments, each of which is unrelated to any other and particularly unrelated to student interests. Emphasis is on getting through the curriculum, the materials. The student is practically incidental to the process.

This approach to curriculum design is for the sole purpose of continuing the elements of society which are determined to be essential and important for students, by authorities such as governments, school boards, administrators and teachers. It assures continuation of the status quo, including any inequities for subsections of the population.

The purpose of learning should be to understand more, in order to better oneself or to better a situation. Students, though, generally are expected to learn but cannot better their situations. If schools are to promote lifelong learning, they must make learning relevant, interesting, fun and rewarding from the students' perspective. Through the students' eyes, what they do outside of school has great importance, while what they generally do in school may have less value. It is quite possible to center curriculum and classroom processes around what students do outside of the school, but it means rethinking several aspects of instruction. The time divisions in schools are obviously artificial, and might not be necessary if students were following areas of interest in order to learn. Further, the Navajo and Hopi learning styles are more wholistic and passive than most curriculum allows. In cooperative learning situations, these elements can be utilized. The elements of the extended family, peer tutoring, peer coaching, activity approach, cross-grade tutoring, extended observation, outside of school resources, sharing of ideas and materials, and much more come from the culture and can be used in the classroom. If conceptual elements are given to students at the beginning, and they are allowed to follow their interests in determining how they will learn the elements, the situation will be much more realistic and allow them to develop techniques and responsibilities for learning. Learning, then, will become a part of their life and is much more likely to be carried on after schooling has finished.

Students will develop social skills in order to get along with others.

In order to learn to get along with others and develop social skills, students need opportunities to work with others in organized and unorganized activities. They need chances to wrestle with social problems as they arise and develop tentative solutions to awkward situations, later trying ideas and developing their own successful mechanisms for dealing with themselves in groups. This development can happen only as schools reduce the numbers of rules and allow students to transfer control for their actions from external to internal. They also need opportunities to learn about and discuss social conflicts and social inequities in their own lives and as presented by the media, novels, movies, and other sources. They can learn directly through resolving situations in which they find themselves, and vicariously through developing possibilities for resolving situations observed involving others. There may be some cultural processes which need to be considered in development of classroom activities for this area. Chapter 13 on testing

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outlines some of the considerations in "if...then" and hypothetical situations. The important factor here is that they learn to determine actions for resolution of problems, inequities and awkward situations rather than avoiding or accepting them. Activities toward this end will dovetail with those designed to support self-concept and self-assurance.

In Navajo and Hopi cultures, people learn to get along with others because they have to in order to get the job done. Generally, a goal is discussed and determined so that all can see where the group is headed. Tasks and timelines are determined to achieve the goal (be it building a hogan or putting on a ceremony). Each person then determines his/her contribution to attainment of the goal, and how his/her efforts need to be coordinated with those of others. Problems are discussed and worked out, with assistance offered and obtained as needed. The process both requires and develops social skills.

Students will appreciate their culture and the culture of others.

How can students respect their culture if it is subordinated by the materials and process of the schools? Schools imply that Navajo or Hopi culture is OK to do at home or at special times at school (Indian Day), but is not adequate for "real" learning. When we "really" learn, we must do so in English and about things that are far away. No wonder students have an identity problem! They are put in a situation where they must choose. Their parents keep after them to go to school, but the school implies that their own culture is not as good as the one the school promotes. What an insidious way to continue cultural stratification! Schools imply that languages, thought processes, even values are in a hierarchy. Some are better, like English, Anglo, European, American, even Oriental. Others are not as good, since they are not worth utilizing or studying in school, like Navajo, Hopi, other Native Americans, most Africans and most South Americans. The current curriculum content and educational process reinforce this.

Man: A Course of Study, a fifth grade social studies curriculum, made a strong effort to counteract the ethnocentric approach of schools, centered around the questions "What makes man human?" and "How can s/he be made more so?". Based on ideas from Bruner, it spent time looking at innate and learned behavior, socialization techniques of birds and animals, and a full semester studying all aspects of Netsilik Eskimos. In the Eskimo semester, actual field research was reviewed, songs and games learned, movies of everyday activities viewed, values studied, and the context of Eskimo life discussed. By trying to learn why Eskimos do the things they do, the students began to appreciate different cultures and make cultural comparisons. They began to question values and assumptions in their own lives, often looking for the underlying reasons for their own situations. As an immersion was done in an unfamiliar culture, their own culture became more obvious, with its strengths and its relations to other cultures more apparent. Students could then discuss and plan based on a more objective awareness. Giroux and McLaren (1986) feel strongly that the study of cultures and the interaction of cultures is essential for classrooms and for teacher education programs in order to provide relevance to the educational process and a more wholistic approach to students.

Summary

School philosophies contain wonderful idealistic statements which, if implemented, would assure a valid and appropriate educational process. By using the philosophy as a guide for school processes, that is, using it as a criterion for daily, unit, and yearly practices or methodologies, reservation education could be greatly improved. The model for much of what needs to be done already is present in the culture of the students. Bringing the students' out-of-school lives into sync with the in-school practices would surely improve education, would probably improve achievement and would reduce drop-outs as well.

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In actual classroom practice, the bringing together of philosophy with curriculum is difficult. School staff generally agrees completely with the philosophical statements presented by the school philosophy and objectives, but on a day-to-day basis, they have a hard time keeping those ideals in mind.

The grids shown in Figure 1 and Figure 2 may be helpful in assisting all of us to bring philosophy and practice closer together. These grids come from Hotevilla Bacavi Community School, whose philosophy called for development of four major areas for students: 1) learning how to learn; 2) a positive self-concept; including self-confidence, a positive self-image and skills at self-evaluation; 3) the place of the individual and groups in the larger picture of local, regional, national, and world culture; and 4) responsibility for one's own self and one's own actions.

* * *

Figure 1
Philosophy Grid

What

Objective	Learning	Self Concept	Culture	Responsibility
1				
2				
3				
4				

* * *

The statement of philosophy further indicated that teaching methodologies of the school were to 1) be wholistic and locally meaningful; 2) provide for an open and risk-free environment for students; 3) provide a safe and supportive environment for student learning; and 4) provide for the needs of individual students.

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Figure 2

How

Objective	Wholistic Meaningful	Open/risk Free	Safe/ Support	Individ Needs
1				
2				
3				
4				

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We teachers were to use the grids for periods throughout the year, placing daily and unit objectives in the left hand column. They could then check the boxes under the various components of the philosophy to see what elements they were developing more and which ones might be slighted. They could then adjust their materials and approaches to make sure that over a reasonable period of time, they were developing all of the elements of the philosophy that the school board thought important.

In using the Philosophy Grid, it was found that overuse became burdensome, but at the beginning of each semester, using the grid for about a week was enlightening. Also, spot checks, putting objectives for one day on the grid, about once or twice a quarter were seen as helpful. The school administrator asked that this be done at a staff meeting, but did not feel that his review of the products was necessary. This procedure kept us thinking about the purpose of the school in a non-threatening manner.

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Chapter 11 Main Ideas

School boards generally set admirable goals for schools and students.

Schools generally do not pay much attention to philosophical statements as adopted by their school boards in their daily activities.

A closer correlation of daily activity and school philosophy is possible, and would likely result in increased focus of the school.

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Just as important as why students learn is what students learn and how we know they have learned it. The next two chapters deal with those issues.

Chapter 12

Curriculum

Curriculum is what is used to foster learning in students. It is both materials and methodologies. Some of it is obvious and some is hidden. It is what is not put on paper. Curriculum has to have "buy-in" by those administering and directing it. That means that we, and the students, have to believe in what we are doing to foster learning. It also means that administrators have to understand the curriculum and associated processes and be willing to support them.

Jon Reyhner, in Teaching the Indian Child: A Bilingual/Multicultural Approach (1988), and in Teaching American Indian Students (1992), as well as Hap Gilliland, in Teaching the Native American (1988), have several chapters of suggestions for teaching specific traditional subject areas to Native Americans. These chapters do contain useful information and suggestions, but generally follow what the schooling system has been trying to do for decades. They tend to focus on the subject area and on the teaching process, providing ideas to try to get students to learn the material. I am suggesting that by focusing on students, the learning process, and student needs, an interdisciplinary approach to curriculum development is more likely to be successful. While some suggestions from the above books may be helpful, the necessary change in approach will require thinking about Native American education in a different way.

Tyler (1949) talks of curriculum as the means for planning an educational program with explicit goals in mind. He specifies the learners themselves as a source of educational objectives. By looking at students in life outside the school, a valuable source of potential educational goals can become apparent.

Scollon and Scollon (1983) present a wonderful "Axe Handle Academy" in which the curriculum would be centered around the concepts of 1) bioregional studies, 2) cultural studies, and 3) communication studies. They give an insightful set of final exam questions for each component of their "curriculum." As in the ideas presented below, they are interested in concepts and learning of life-enriching skills as the reason for curriculum.

Curriculum cannot be imposed on teachers, it has to be developed. The internal understanding and "buy-in" is essential. Sometimes that means re-inventing the wheel, redeveloping essentially the same thing over and over as teachers and students change. Such reinvention is a necessary component of curriculum development. Solidifying curriculum by writing it down can make it stagnant and somewhat inappropriate, since the beauty of having us teachers act as facilitators of learning is that a myriad of possibilities are available as learning situations. The teacher and students moving together through the labyrinth, toward a goal. If the written curriculum

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does more than provide the framework for goals and a few possibilities of the many ways of attaining the learning goal, it becomes restrictive rather than helpful. Often the curriculum materials handed to teachers are volumiious, at least, with the focus on teaching activities rather than on student learning. It would be much more helpful for curriculum materials to concentrate on the goals and objectives as they relate to students and let teachers develop strategies which fit their students.

An element in developing curriculum for Native Americans should be to begin with their strengths and build upon those. From research and opinion, those strengths include:

1. a higher than average awareness of spacial relations
2. better than average awareness of and memory for patterns
3. better than average attention to and memory for detail
4. concern for the slower person, the loser in a contest
5. good hearing and listening skills, probably because information in their native language is transmitted orally rather than in writing
6. slow and thoughtful decision making
7. each person being responsible for him/her self
8. a generally non-judgmental attitude
9. an attitude of taking whatever time it takes, timelessness is more a part of thinking than is time
10. sharing belongings rather than being possessive about things
11. patience.

In order to develop appropriate curriculum, we educators would want to concentrate on goals, ideas and processes first, making sure we, the community and the students were knowledgeable and comfortable with that direction first. In developing the procedures, wholistic understanding, activity and use of manipulatives would be emphasized. Also, interests of the student and our interests would be utilized. Generally, if we are interested and excited about something, there is a chance the student will become so. If we are bored, the student will be too. Scope and sequence is less important than wholistic understanding. We need to give opportunities for intuitive leaps.

The school philosophy is a good starting place to see what the school should be trying to do. Generally those philosophies center around concepts dealing with 1) learning how to learn, 2) learning to get along with yourself and others, and 3) being able to work in any physical and social environment. Curriculum will be stronger and more effective if it recognizes that each student is different with different background, skills, interests, strengths, and weaknesses and needs to be treated accordingly. It will also be more effective if it starts with the concrete and moves to the abstract, since Native American students learn best when they begin with the familiar and

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develop to the unfamiliar as they progress. A final suggestion is to emphasize learning by doing, since students learn better and more thoroughly when they are doing, rather than when they are reading about or hearing about something. Cajete (1988) encourages curriculum which is practical, functional, relevant to daily living, utilitarian, concrete and/or experiential, leading to the abstract theory. Henry and Pepper (n.d.) agree that Native American students learn faster when going from concrete to abstract, from practice to theory, contrary to the process used by most schools. They also suggest cooperative learning techniques and use of manipulatives. Remember, the curriculum provides a way to foster student learning, not the way.

In determining the basic elements of a subject area curriculum, an overall, wholistic view is needed. It is helpful to educators to look at the essence of content and to try to develop curriculum around ideas that run through the whole fabric of knowledge. Specialists, published materials, and textbooks have vested interests in providing a great amount of material, without necessarily giving it a place in a larger picture and certainly without wholistic simplicity.

For example, in looking at language arts curriculum materials in a school, we might find at least one large notebook, probably more. However, language arts in its simplest format could be broken down into two components: communicating and analyzing. The communicating could contain four elements:

1) listening—hearing, comprehending, and interacting with a speaker
2) speaking—talking intelligibly to one or more listeners
3) encoding—putting ideas into a format which is transportable (or savable) and understandable to those knowing how to decode (this could be poetry, music, art, drama, etc. as well as

written language. It might also include tape.)
4) decoding—being able to understand and utilize communication which has been encoded. (This implies being able to understand meaning, message and feeling in the words, music, art, dance, etc.)

The analysis part of the language arts curriculum would entail development of thinking skills.

Most mathematics instruction in elementary and secondary schools centers around computation. While this is indeed a part of mathematics, it is a relatively small part. Much of mathematical thinking can be distilled to concepts around activities, such as reasoning, pattern, probability, estimation, logic, observation, categorization, etc. Notice that these concepts are not exclusive to mathematics. They are interdisciplinary concepts. Even in computation, if larger concepts are kept in mind, the fun and excitement of working with patterns can be kept. The basic ideas of arithmetic or computation, which support mathematical thinking but involve only a small part of the process, would include

1) line—particularly a firm understanding of number line, but also including observations about values along straight and curved lines
2) area—awareness and value in two dimensions, giving a surface area (volume would be a combination of area and line, for the third dimension)
3) equals—concepts of the same and different and how things can be manipulated to make them the same or different.

The National Council for Teachers of Mathematics has developed some very good guidelines which will help us understand the main ideas of true mathematical thought.

If mathematics were presented as elements of these concepts, math anxiety on the part of both teacher and student could be reduced. We get so caught up in the manipulation of numbers in arithmetic that we often fail to let the students develop their own natural mathematical skills. Of course, the advanced mathematics student studying non-Euclidean geometry, fractals, and such things, may find concepts well beyonds our ability as elementary or secondary teachers, but that should not be a problem. The goal of education should be to let the student surpass the teacher. If math anxiety could be reduced, perhaps more students would feel comfortable getting into advanced areas of mathematical thought.

Similarly, the main elements of most academic instruction can be distilled to a few major concepts. As we begin to do this, we find that the approach proposed by Bruner in Man: A Course of Study (1968), begins to make more sense. By concentrating on 1) same and different, 2) cause and effect, 3) structure and function, and 4) patterns, cross-subject curriculum development begins to make more sense. Wholistic observations, across disciplines, and applicability to everyday life situations also begin to play a larger part in curriculum development and teacher/student activity.

Much of what we are asked to do in social studies and science includes a lot of memorization of specific detail. We have to make sure that students know the capitals of the states, the names and locations of countries, the dates of certain occurrences, etc. Actually, social studies centers around looking at the interaction of people in the past and in the present in order to try to find patterns. Those patterns can then be used to analyze current happenings and even predict what might occur in the future. That is really not much different than what happens in science. We look at what happens, categorize, evaluate, and determine causes and effects, and predict future occurrences. In both subjects, we should be concerned with a larger picture and use the detail primarily to reinforce that overall understanding. In fact, most school curriculum should be centered around development of critical thinking skills on the part of the students. This will lead to integration of curriculum, since these skills cross all curricular areas.

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No matter what we do, we need to take care to keep the curriculum alive, fun, interesting, and pertinent to students. It is helpful if we can have fun with it too. Many curriculum guides take that fun away, leaving us with a chore which we don't like very much. The problem, in most case, is not the subject or even the concepts, but is the format, length, scope, sequence, etc. presented in the curriculum guide or textbook. Most subjects can be fun, if we can get to the main ideas and work with them in a way which is meaningful to us and to our students.

The curriculum ideas presented below are meant to be just that—sample ideas from which we can jump off in developing learning situations for our own students.

****

Curriculum Ideas

Prerequisite Thoughts & Questions

1. What is the purpose of schools?

2. What should children learn?

3. How do children learn best? most naturally? In school? Out of school? Can we make school learning more like real life?

4. What should be the relationship of the school to the community? the parents? the students?

5. How does the school function in the larger picture? Survival, happiness, comfortable life, jobs, job preparation, etc.

6. What skills should the school teach? Can we really teach anything? Or do we simply help children learn?

7. Who are those involved in the learning process?

8. Is scope and sequence necessary? Appropriate? Some of the time? All the time? For all students?

Parental Involvement/self-esteem

Have students get information which we don't know but the parents do. Display the information obtained prominently in the building so those who visit can see it.

1. Family Trees. Have the students develop family trees by blood and marriage for three or four generations. See how many can be combined. Put it on a chart and display it at the school. Keep updating it. Do the same thing by clan.

2. Make a timeline of local history. Do research by asking parents, grandparents, relatives, old people. Put it all on a chart and display it at the school.

3. Is there local clay which could be used for pottery? Where? What do we have to do with it? Could it be used for decorative tiles? How does it have to be fired? What else can it be used for? How do things made of clay compare to the same things made of other materials, wood, plastic, cement, etc.? Do it. Try it.

4. What are all the foods that corn is used for? What else is added? Is there any food that is made from corn that doesn't taste good?

5. When we butcher a sheep (deer, rabbit), how are all the parts used? Is there anything that is not used? Are there things which were once used that aren't any more? What food, made from sheep, tastes best? What tastes worst? Does everyone agree? Do old people like the one we think is the worst? Why?

Motivation

Do local things. Don't worry about keeping to one subject area, most things in life are multidisciplinary. Have students do activities and research.

1. Measure height of water tower, flagpole, using proportions. (measure shadow of tower and of a stick. Stick to stick shadow is same proportion as tower to tower shadow.

2. How does a bread oven work with no fire while cooking? How hot does it get? How hot is it when bread goes in? How hot when bread comes out? How is it made so that it works like this? Build a bread oven for someone. What materials are needed? How much? How big? How much will it cost? How long will it take? Who can do it? Who can help? Who can supervise? How accurate were we? Solar?

3. Why won't grass grow in the yard, on the football field? Is some chemical missing in the soil? Is there some extra chemical? Is there anything we could do? (Agricultural extension from universities will help with soil analysis and advise) Should we be having grass? Does it take too much water? What purpose does it serve? How about on the athletic field?

4. Are there chemicals and/or bacteria, etc. in water from the tap, from the spring, from puddles? Look in a microscope. Send out for analysis. Do they look, smell, taste different? Which are safe to drink? Which are safe for animals? Is there a difference? Why?

5. Is there any relation between dances and rain? Does it rain/snow more near dances? Sixteen days before, four days after. Dances are also for other good things. Is there more happiness, more births, fewer deaths, etc.? (Be careful and sensitive.)

6. Keep track of deaths and causes. How many are alcohol related? How many are from vehicle accidents, etc. (Again, be careful and sensitive. For some tribes, this may be completely taboo. For others, it will provide a good learning experience if handled carefully.)

7. Keep track of births. Is population growing or declining?

8. What about the environment?
    a. Is the ground getting better or worse for growing?
    b. What about trash? Dumps? Breeding for rodents, etc. Other health hazards.
    c. Recycling. Aluminum, plastic, glass, electronics, cars
    d. Can housing be done to take advantage of the environment? How would such a design be different from how we now build? Are different people's homes different? What are advantages and disadvantages?
    e. What are alternative energy sources for homes? Solar (electric and heat), wind, hydrogen. Do any make sense? What are advantages and disadvantages? Will it work? Is it better to be independent or to be hooked to large systems? Build solar oven, solar hot water heater, wind generator, etc. How much heat/power do they produce? Is it enough? Could it be part?

f. Map the room, the school, the school compound, the village. Make things to scale. By comparison, how far would it be to Phoenix, New York, Paris, Tokyo? Write to someone in New York, Paris, or Tokyo, or contact them on E-Mail. See if their homes are closer together or farther apart? Do people need more or less space in some parts of the world than others? How many people are there per square mile?
g. What percentage of local people work most of the time inside? Outside? Does this affect environmental awareness? Does TV have any effect on environmental awareness? What about windows?
h. Is the school ecosystem healthy? What does that mean? What about the ecosystem within a 20 mile radius?

Use the arts as a natural motivator of students. Real two and three dimensional creative art (not coloring in the lines) gives students a chance to utilize natural abilities in spatial awareness and cultural interpretation. It also gives a chance for students to express themselves in a medium where there is not a "right" and "wrong" answer. They can develop means of communicating with the arts. It is a mostly non-threatening situation.

Music and dance give much the same opportunity to students. Vocal or instrumental music gives an opportunity for creativity or at least a chance to recreate something. Music and dance can utilize the interactive strengths of the group in developing a performance. All can give students a chance to develop their abilities to communicate a message or feeling to others in a non-verbal manner.

The student interest in the arts can also be used as a means of getting to other academic areas. Following are some ideas in getting brainstorming started to relate the arts with other areas. It could obviously go on much more.

1. What colors are "warm," "cool," neutral? Why?
    a. Can intensity or shading change that? What does intensity do? What do we mean by "intensity"? Saturation?
    b. Do colors have opposites? If so, do they relate to other opposites in other fields?
    c. Can sounds have "color"? Can color have sound?
2. How do different amounts of material or color combine for use?
    a. Chemicals for glazes
    b. Clay and sand for pottery clay. Does raku clay differ from other clay?
    c. Does the firing technique determine the clay? Or the clay determine the firing technique?
3. Why are clarinets wood and flutes metal? How do they affect sound? Are there metal clarinets and wood flutes? Why?
4. What are ways of making sound? How about just sound with breath? How about sound with just hands?
    a. Does the shape of the instrument matter?
    b. Does the material of the instrument matter?
5. How does heat affect things?
    a. Clay—what temperature
    b. Glaze—what temperature?
    c. Sound (also does movement affect sound?)

    - d. People—what temperatures make us comfortable, hot, cold? What temperatures make us sick? Why? What is our body doing? Can we do anything about it? Should we?

6. How does singing feel? Dancing? What do we need to sing or dance? Do we need sound, rhythm, beat, melody, harmony? What is the difference if different ones are present?
7. How fast can we see something or hear something?
    - a. How much time do we need after we see or hear it to recognize it?
    - b. If it is moving, how long do we have to see it to recognize that it is moving?
    - c. How many frames per second does it take to make movement smooth in a film or flip book?
    - d. Make an animated film
8. What musical instruments and art/dance techniques are traditional in the local area? Is it appropriate to study, utilize, adapt them to a schooling situation? How do these relate to music, art, dance of others? What do they have in common? What are differences? Why? Are these for a purpose?

Responsibility

Responsibility and authority must go together. If students have authority to make decisions, they must have the responsibility to take the consequences of their decisions. Conversely, if they have responsibility in an area, they must have the authority to make meaningful decisions in that area.

1. Where possible, students should have responsibility and authority to act for themselves concerning their (the class's) money, projects, field trips, non-academic activities. As they grow older, they can assume more and more authority and responsibility.

2. Individuals are a part of larger groups. Therefore if an individual acts in an irresponsible manner, the group can take away the authority for the individual to repeat irresponsible actions. Does this have to be made known and agreed upon ahead of time?

3. The fewer and broader the rules at school, the better.

4. Help each other. One person is not responsible for another, but can help in many ways. There is often a responsibility to help, sometimes even to direct.

5. Everyone must learn that they alone are responsible for their own actions. No one can blame another for what s/he does.

6. Are there things we shouldn't know? Do? As absolutes? Only with prerequisites?

7. Teenage pregnancy—roleplay activity of caring for and paying for a baby.
This is a project which worked well at Hotevilla-Bacavi Community School, on the Hopi Reservation.

Fourth grade girls were assigned a "husband" and he was, in turn, assigned a job and a salary. (These roles reflected the culture of the community and could certainly change to reflect other situations.) Each girl had to bring a doll to school to care for as if it were her own, and the husband's, from a teenage pregnancy. The "family" had to determine how they would be able to afford food and clothes for themselves, as well as diapers, clothes and food for the baby, based on the boy's salary. They did comparisons of prices of items at local stores, at supermarkets, and at discount stores.

For the week of the project, the girls brought the dolls to school and were required to carry them around all the time. Every two hours they had to go to the principal's office to "feed" their "babies." One night during the week, the whole class stayed overnight at school, boys in one room, girls in another. Every two hours, through the night, they were awakened to "feed" their "baby."

Reports from the students and from the teachers indicated that the project had a real impact on students.

Self-esteem/accomplishment

Have students involved in projects they choose and want to complete. Help them to persevere and achieve their goals.

1. What does the school need? (i.e. an outdoor basketball court, a sign, new paint, repair the playground, etc.) What would it take to get it? (money, materials, work) Can we raise the money (or borrow it and pay it back), get the materials, provide or get the manpower? Have students take charge of the accounting, develop timelines, arrange loan and interest if needed, call or write or talk to people for equipment and volunteers.

2. What are major problems for children and young adults and what can we do about it?
    a. Alcohol abuse—estimate cost in lives, trash, money spent which could be used for better things, etc. Pick up and recycle cans, plastics, etc.
    b. Jobs—determine number of salaried jobs available on reservation. Determine number of people of work age. Determine areas of work needed on reservation that people have to go to town for. (i.e. TV repair, appliance repair, shoe repair, beauty parlor, movies, books, tapes, CD's, etc.) What skills are needed? What business skills are needed? How can a person set up a one-person business?
    c. Something to do—Teen Center, Movie Theater, evening activities, weekend activities

Self-Sufficiency

Can and should I take care of myself/my family, or should I depend on others and other systems? Ask questions and have discussions where there is not a "right" answer. Get students to understand that there are not "rules" in these areas and what is "right" one time may not be in other circumstances.

1. What systems provide free things to the people? What, if anything, do the people give up for this?

2. Is it possible for a person to live only on free things? What are the advantages and disadvantages?

3. Is it possible for a person to live accepting nothing from others? What are the advantages and disadvantages?
   a. What about accepting help only from family, but not from large systems?
   b. What about only from family and friends, other village members?

4. How does the group, the extended family, the village deal with these concepts? What are alternatives?

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Chapter 12 Main Ideas

School curriculum is what students and teachers do on a daily basis, more than what is written in manuals.

School curriculum can be developed around concepts rather than around subject areas.

Curriculum and activities need to be interesting and pertinent to the local community and students. There are locally available, pertinent materials and resources which can be used for school curriculum.

Any concept can be taught/learned through almost any subject. Most important concepts appear in many subject areas.

The arts provide a natural way to get interest or attention of Native American students.

Basic elements of a curriculum may be relatively simple compared to the scope and sequence and other elements presented by publishers, schools, and districts.

Chapter 13

Testing[1]

Testing, particularly standardized testing, of Native American students has caused problems to schools since the beginning of Native American education. Almost without exception, Native American students score lower than the national norms on standardized tests. McDermott and Aron (1978) feel that much of the testing done on students is concerned with minor differences and is tested through a too limited set of intellectual tasks. They indicate “In our attempts to sort children efficiently into the occupational roles of our market place, we may be doing more harm than good.” (p. 44) This chapter presents some possible explanations.

Standardized Testing

The question of standardized testing of minority students is a perplexing problem. Analysis of tests such as the Iowa Test of Basic Skills (ITBS), the California Achievement Test (CAT), the Stanford Achievement Test (SAT-7), the Stanford Test of Academic Skills (TASK), the Pre-Professional Skills Test (PPST), and others, show a consistent pattern in that scores of minority students are below national norms. Generally, Blacks and Hispanic Americans are several percentage points below Anglos, and Native Americans are several percentage points below the Blacks and Hispanics. See Table 1 below for specific examples.

* * *

Table 1
Arizona public schools achievement test scores, 1987-88 school year (Bishop, 1988); reading percentile rank

Grade	1	2	3	4	5	6	7	8	9	10	11	12
Natl Norm	54	53	52	52	52	50	50	48	50	50	50	50
St Norm	49	58	51	53	55	52	51	48	57	52	52	56
White	57	67	58	60	63	61	58	57	69	61	61	64
Black	35	42	36	39	42	38	37	33	42	38	37	37
Hispanic	36	40	37	39	42	38	37	34	43	38	35	39
Nat Amer	29	32	29	32	34	30	29	28	32	28	25	25
Asian	58	64	57	60	64	64	56	56	66	55	51	54

* * *

Table 2
PPST scores by ethnicity, percent passing

	Nat Am Reserv	Nat Am Urban	Hispan Rural	Hispan Urban	Anglo Rural	Anglo Urban
Reading	24	52	58	59	79	78
Math	33	48	69	62	82	81
Writing	20	55	50	60	79	82

* * *

Analysis of the scores of Arizona test takers on the PPST showed similar results. See Table 2 above. For several years the PPST was used as an entrance or exit test for teacher training programs in Arizona, New Mexico and other places. It has generally been abandoned, partially because of its apparent racial bias.

Notice that Table 2 also shows a breakdown for rural and urban populations within each ethnicity. The Arizona numbers for Blacks taking the PPST were insufficient for statistical purposes. There is little difference between urban and rural populations for Anglos and Hispanics, but significant differences between reservation and urban Native Americans. In trying to find a reasonable explanation for the discrepancies by race, rurality and urbanity by themselves were not adequate. However, when combined with culture and the differences for Native Americans on and off the reservations, some areas for investigation became apparent.

An analysis of ITBS, SAT-7, and TASK showed similar discrepancies between town and reservation Native Americans in Arizona.

Through looking at possible reasons for poor performance on standardized tests by Native Americans, we may reach some conclusions that generalize to other minority populations. The Native American population scores farther from the norm than other minority populations and also is generally believed to be culturally more different from the "normal" United States population than other minorities, in that the Native American traditional cultures are more intact. This is particularly true of the Navajo and Hopi cultures, which were the ones observed. Therefore, possible reasons for the differences may be easier to discover. With the Native American population, there is also considerable discussion about the effect that living in off-reservation towns is has on Native American culture. I did observations and testing primarily on and near the Navajo and Hopi Reservations in northeastern Arizona, realizing that generalizations to other Native American populations would have to be confirmed as would generalizations to other minority populations.

One area I thought might contribute to the testing process and to Native American performance on standardized tests is the perception of reality or world view. Witherspoon (1977) states that some English sentences indicate relationships which are not possible in the Navajo world view. For example, where Anglos generally deal with reality in terms of fiction and non-fiction (truth and fiction), Navajos and Hopis have three types of reality. .They have truth, the same as the Anglo truth. They also have mythology, which encompasses things that used to be true but may not be observed any more. For example, in coyote (or bear, or raven, or other animals for different tribes) stories, the coyote used to talk to human beings, but he doesn't do that any more. Spider Grandmother used to do the things described in the stories, but she doesn't do such things now. In other words, mythology is historically true, but not presently provable. Thus it is useful, but not current. The third category is "lies." Not fiction, because fiction as it is known in Anglo culture does not exist. If something is not truth or mythology, it is "lies", with many of the negative implications of the word.

As I thought about the matter of categories of reality on the reservation, I found a need for a transitional category that would not be defined as any of the preceding three. Alternatively, perhaps information can easily transfer from one category to another as its validity is determined. There is a great deal of new information that an individual constantly receives from various sources. It is not always possible to determine quickly if it is truth, mythology, or lies (fiction). Until the new information can be categorized as truth by being compatible with other truths already known, or as mythology by being compatible with other factors of that category, it would have to be temporarily categorized as either lies or as unknown. Neither of these last two categories would be usable for the purpose of developing theories, adding to knowledge, or developing answers to tests.

I was able to check the theory that conflicting world view could cause problems in choosing correct answers on a standardized test through a survey of 127 Navajos and Hopis living on and off the reservations and 38 non-Native Americans. The survey told of a Paul Bunyon story in which Paul formed the Grand Canyon by dragging his axe as he was walking across Arizona. The subjects then chose the best answer, based on the story, from choices given. To the question "What formed the Grand Canyon?" one choice was "Paul Bunyon's axe" and another was "erosion from the Colorado and Little Colorado Rivers." Table 3 shows the results.

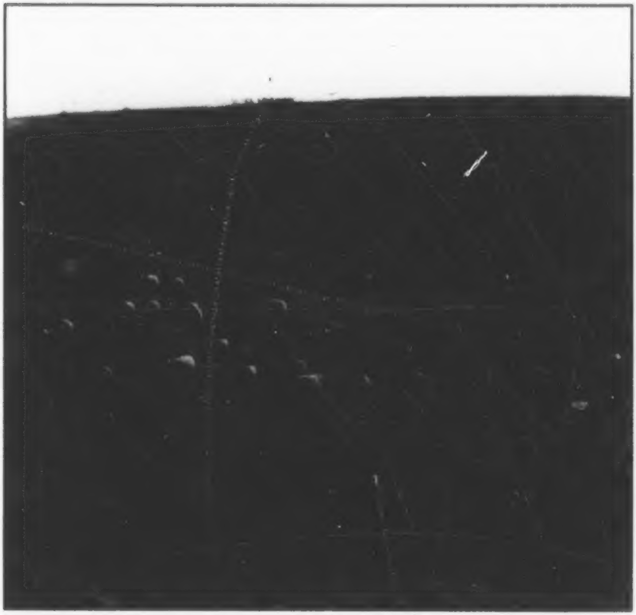
****

Table 3
Percentages of affirmative answers to the question, "What formed the Grand Canyon?"

	On Res Nat Am's	Off Res Nat Am's	Anglo
Paul's axe	65	77	92
Erosion	35	23	8

****

It is apparent that the Anglos were more able to use the reality of the story than were the reservation Native Americans, with town Native Americans scoring between the other two groups.



In working on this project, I found that the word "if" does not translate directly in the Hopi language, nor in the Navajo language where it is used in a cause and effect relationship. That does not imply that these languages cannot deal with causality. Cause and effect are understood and used in both languages, but in a much less direct way. There is not a direct implication of one-to-one correlation in cause and effect. The field is left much more open to other possible causes, though the listed cause is recognized as having an effect also. For example, in Hopi, the translation for "If my check comes in the mail, then I will go to town," becomes "My check might come in the mail and I might go to town." There is a relationship between the two occurrences, but not direct correlation.

In a question requiring hypothesizing from an "if...then" situation, reservation Navajos and Hopis scored significantly lower than those from towns. The question was "If 2 + 2 = 5, then 5 - 2 = ?". As educated Anglos, we simply use algebra to solve this problem. "If A + B = C, then C - B = A." Results of the testing are shown in Table 4. The implication of these results is that reservation Navajos and Hopis have a more difficult time with non-true hypotheses and with cause and effect relationships worded in an "if...then" fashion.

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Table 4
"If 2+2=5, then 5-2=?,"
percentages of two different answers

Answer	On Res Nat Am's	Off Res Nat Am's	Anglo
2	51	70	83
3	49	30	17

Significance: p=.002

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Another factor that I thought to have an effect on Native American performance on standardized tests is their decision-making process. Whereas the test requires quick answers, guessing, and risk-taking, the reservation Native American has learned to make decisions slowly but surely, and to be correct the first time. S/he will also tend to want to combine elements from several possible correct answers into an appropriate answer, rather than choose only one from the choices in a multiple choice situation.

Kleinfeld (1973) relates a situation concerning the Eskimo intellectual process in finding one's way in the featureless Arctic environment. Imagine that an Eskimo is leading a hunting party out on the ice several miles from home. It is getting dark, a storm is approaching, and there is no more food, but the leader has become disoriented and is not sure which way is the right way home. Compare his decision-making process with that of someone disoriented in a town and not sure which way to go. Town persons can flip a coin and set out in one direction. If they are wrong, they will simply turn around and go the other way when they discover their error. The Eskimo has a much more serious dilemma. If he chooses wrong, he and the others in his party will die. A flip of a coin does not give adequate odds of being correct in this situation. The Eskimo wants a much better chance of being correct the first time, so he waits and gathers more information and other opinions before making a choice. When he finally does choose, he will have a 95 to 99 percent likelihood of being correct. The situation demands such a process.

While the Hopi and Navajo environments are not featureless ice and snow, they are harsh desert, with minimal or confusing features and little water. The decision-making process to be sure of survival, or at least comfort, is similar to that of the Eskimo.

Unfortunately this process is slower than most timed multiple choice tests allow. Also, it can be seen that guessing is inappropriate in the life situations described, whereas it does tend to raise scores on the tests.

The multiple choice aspect poses an additional problem. In most reservation situations, it is important that people work together to be able to survive. For

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ceremonial activities as well as many everyday tasks, more people are needed than are available in an immediate family. The implication for decision-making is that most decisions need to be made by consensus rather than by vote. The decision-making process is one of discussing all aspects of a problem and getting input from all who want to contribute. Then a plan of action is derived following all of the input, so that everyone who has contributed can feel that they are a part of, and will help to work on, the solution. If solutions were developed by voting, those who lost the vote would be less likely to help in overcoming the problem. They would feel less sense of belonging to the group. By the consensus process, even if the solution is somewhat less effective, everyone feels a strong sense of group and will work together. Lamphere (1977) outlines the specifics of this consensus process for Navajos, stressing that "In a society where the emphasis is on autonomy, joint action is gained by the consent of other free agents." (p. 40).

Deyhle (1983) has done interesting work with young Navajo students that indicates that they are much more interested in the process of test taking than they are in the product of the test, until about third grade. Beginning at that time, standardized test scores for Native Americans start to deteriorate. Students become aware that they are being judged on their test scores, and various factors cause those scores to be low, giving them problems in self-esteem. Older students then begin to dislike tests. However, on teacher-developed tests, they can at least see a result of the testing process and feedback is often given to the student that can result in better performance at a later date. In the case of most standardized tests, results are not given back to the student until much later. By then the student is not able to apply the information gained from the results to the improvement of test performance. In the case of achievement testing in schools, results are usually not back to the school for several weeks or months, and often those results are never given to the student. The student, then, has the perception that the results of the test will not be used, so it really does not matter if he performs well or not. The results of the test are not related, in the mind of the student, to a larger picture, to graduation, to college entrance, to jobs, or to other goals.

Native Americans seem to view such standardized tests in isolation rather than as goal-related. Also, goals for Native Americans are much less firmly entrenched than are goals for Anglos, somewhat in the manner of cause and effect concepts discussed above. The language and the thinking of Navajos and Hopis is oriented toward the present and the past where Anglos tend to think and talk more in present and future. Long term goal-setting is much more an Anglo attribute than a Native American one. Native Americans are much more likely to let external factors modify their goals, while Anglos are more likely to ignore external factors in goal attainment. Standardized tests are seen as moderate to very important factors in goal achievement for Anglos, and therefore have some intrinsic motivation even though results may not be available for some time. For the Native American, the goal is less well-defined, so the test results are not intrinsically motivating. Nor are the results particularly useful, so performance on the test is not relevant to anything seen as real.

Test Bias

The question of test bias is always valid when dealing with an instrument developed by one culture, primarily for that culture, and yet administered to individuals of another culture. Even an item so seemingly innocuous as the names of the individuals in stories become an element which may have an effect on test takers. Hopis have verbalized that the Anglo names which they now use and which were given to their grandparents when they entered school are not meaningful names and are difficult to identify with. In a society that is concerned about both blood and clan relationships, and where names have clan implications, a name of "Joseph" or "Helen" tells much less about the individual than a name of "Polyquaptewa" or "Quamahongnewa." The Hopi names have distinction and clan implications. They tell something about the person and give the reader something to hang on to. The Anglo names don't, according to Hopi informants.

Another factor of test bias which must cause stress is outlined by Lamphere (1977) in that the offering of assistance to those in obvious need is culturally required in Navajo and other Native American societies. The testing process is very much an individual process which specifically prohibits this action by students. Student efforts toward the testing process would be diluted by the cultural distraction of wanting to help others.

Cultural test bias most often refers to content bias. This problem is present in most standardized tests which are given to Native American students, particularly those raised on reservations. However, the case for process test bias is at least as strong. Much further work needs to be done to find out what is actually being tested by standardized tests when they are administered to minority populations. We need to be careful that conclusions drawn from such test results be derived very carefully and with great concern for both the process and content of such tests. Process bias, while not nearly as thoroughly researched as content bias, may be at least an equally significant problem in the use of standardized tests on minority students. The case for alternative assessment means is certainly strengthened.

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Chapter 13 Main Ideas

There is both content and process bias in most standardized tests when utilized on Native American students.

The decision-making process naturally used by Native Americans is a valid process, but is not useful in taking standardized or multiple choice tests.

There are differences in ways of thinking between Native Americans and non-Natives which makes some ways of asking questions inappropriate in one culture. Linguistic and cultural anomalies tend to give misleading results to tests designed for one culture but used on another.

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The curriculum determines what we do which students in school and testing is how we determine whether there has been an effect from our efforts. However, students learn in all situations, at school and out of school. The following two chapters deal with aspects of the teacher and the community.

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[1] Much of this chapter is adapted from my article, “Standardized testing of minority students: Navajo and Hopi examples, in the Journal of Navajo Education, 6(2), Winter Issue, 1989.

Chapter 14

Know Yourself

This chapter presents several areas in which teachers of Native Americans need to look at themselves to determine if they have the temperament, tolerance, flexibility and interest to deal with students from another culture. Not all teachers have those characteristics. Those who don't may be very successful in mainstream situations, but probably will be much less successful with Native American students.

Introspection is important for all teachers, but particularly so for teachers of Native American students. We have to determine what changes may be needed in our approach to children and to education in order to best serve the interests of our Native American students. We have to know not only why we are teaching, but also what we expect of our students. Do we expect our students to go to college, to get a salaried job, to enter the mainstream workforce? If that is the case, we may be unconsciously reinforcing values that are not those of the student or their culture. It is important that our Native American students be able to succeed in the world of work, if that is the world they choose. It is equally important that they be able to succeed as self-employed crafts-persons, if that is the world they choose. They should also be able to choose to be a Peace Corps worker in Africa or a career military employee or an entrepreneur in Los Angeles. The point is, schooling should prepare them for all possibilities, not dictate their future. Our students may herd sheep for the rest of their lives. Our job as teachers is to prepare them to be happy and successful at herding or at anything else they may choose to do.

Teachers have to have their own firm foundation and belief system, but they have to be vigilant in their efforts to have students develop their own systems.

We each come to the classroom with our own background, including ethnic, cultural, family, and religious values. Our students, though, and their community, likely will not share those values. It is not important that our students adopt our systems, but rather that they develop strong systems of their own. Our job as teachers of Native American students is doubly difficult in that we need to show strong value systems of our own in order to foster strong systems in our students, without asking our students to follow our models specifically.

Everyone tells us to "know ourselves." Our parents say that as we are growing up, schools continue the message, religions use it, even our bosses use the phrase. With all of these people being so concerned, and the admonition continuing for so many years, it must not be easy. And indeed it is not. In the teaching profession (or the learning profession) we are constantly evaluating ourselves. We compare ourselves to our goals, to other teachers, to our mentors, to models. We evaluate our performance to see if our students learned, passed the tests, achieved their goals. We are constantly looking at ourselves, evaluating and re-evaluating our performance in relation to students to see if there is something we could do differently that would make the learning process easier, or faster, or better.

Learning/Teaching style

We need to know our learning style: do we learn best when it is warm or cold, when we are hungry or eating, in light or dark, early or late, in groups or alone, from books or from words, by hearing or by seeing or by doing, and so much more. We need to determine if we are left-brained or right-brained. Do we learn best wholistically or sequentially? Do we process knowledge by acting on it or by reflecting on it? One of the most helpful concepts we can learn

from analyzing our learning style is that not all people learn best in the same way or in the same environment.

Cattey (1980) indicates that Navajo students approach their world visually and by quiet, but persistent, exploration. She also indicates that they have above-average visual discrimination and fine motor coordination, quoting several studies in support. Kleinfeld (1973) found that Eskimos were far superior to others in visual coding abilities and visual memory. How do we compare to our students?

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With a little introspection, we can accurately evaluate ourselves as to learning style without taking any of the tests, though taking the test will give us more insight. Chapter 7 and Figure 1, below, will give us a general description that should enable us to make a guess about our learning styles and probably about others' as well. McCarthy (1987) indicates that anyone can learn in any style, but that generally one style is dominant. If we look at our "out of school" learning, that is, our hobbies, or things we do that we haven't studied in a formal situation, we will probably more accurately evaluate ourselves. It is also enlightening to watch ourselves as we talk about and teach others about our hobbies. We often proceed quite differently than we usually do in the classroom. We find that we, and others, have characteristics of more than one style. That is normal and expected. We can all operate in any quadrant (see characteristics of quadrants in Figure 1 and in Chapter 7), and we actually do operate in various quadrants at different times, but we do also have a preferred style in which we are more comfortable and in which we spend more time.

On a scale from active to reflective processing of new information, do we like to try things as soon as we see them to see if we can do it, then learn from our mistakes; or do we like to watch and think about something new until we think we understand it before trying it? If we prefer the former, our first efforts at something new are probably not very good (definitely not able to be sold), but we get better as we go. If we are the latter, our first effort is probably pretty good (even saleable), and we make improvements each time.

If we accept new information sequentially, then the end product does not have to be known, accepted, or understood as we begin since we will develop toward the goal; but if we are wholistic, we want to know where we are going with each bit of new information we process.

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Figure 1
Learning Style Characteristics

Concrete
Experience

Wholistic/ Active	Wholistic/Reflective
Want to put things in a larger perspective, how does it relate Want to do things, meaningful things. Want to change the system, the world Concerned about goals, ideals, relationships	Like to talk, do group work, brainstorm discuss Encourage group unity, peacemakers Would rather talk about it than do it
Active	Reflective
Experimentation	Observation
Sequential/Active	Sequential/Reflective
Like to do it, don't want to talk about it or read about it Can repair things or cook without a manual or cookbook Enjoy making/fixing things Follow pictures and taste	Will get the job done, and on time Good at organization, following directions, timelines, planning Make lists, charts, maps, written direction

Abstract
Conceptualization

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We may want to try the Kolb (1985) test to see if that test agrees with our self-analysis. We may also want to try one of the many other tests available. There are tests of personality which are widely used, but which give slightly different, though interesting, information. The Myers-Briggs Type Indicator (Kroeger & Thuesen, 1988) and the Kirsey Temperament Sorter (Kirsey & Bates, 1984) each give scores on personality traits which are probably related to learning style traits, but the correlation has never been determined. Likewise, the dozen or more popular learning style tests have not been well correlated and it is possible, even probable, that they are measuring somewhat different attributes. It is not nearly so important that we measure ourselves on all of these different instruments as it is that we understand ourselves in general as to how we learn most easily and how we relate to others.

As interesting as it is to know attributes which we have in learning style, communication style, personality traits, etc., etc., it is important to realize that our teaching is affected most by none of these. The single most important factor in determining how we teach is how we were taught. We tend to model our teaching after the teacher models we have had in the past. Since most teaching in decades past was done sequentially and reflectively, generally in a fairly well-lit, quiet, non-eating environments, this is what we tend to provide for our students. Since the emphasis was on teaching rather than on learning, that is also what we tend to provide.

A tendency of teachers to continue the system rather than expand the classroom atmosphere to include other learning styles was demonstrated in a study I did (Rhodes, 1992). Conventional wisdom would indicate that if Native American students were having a hard time in school, dropping out, failing, having low motivation, and causing discipline problems, then increasing the percentage of Native American teachers for those students should help alleviate the problems. I surveyed all schools on the Navajo and Hopi Reservations in northern Arizona, comparing the dropout rates with percentage of Native American teachers at the school. There was a positive correlation between the percentage of Native American teachers at a high school and the dropout rate for that school. That meant that on the Navajo Reservation, the higher the percentage of Navajo teachers, the greater the dropout rate. One way to interpret the data found is that it simply shows that teachers are not teaching in ways they would use in their own culture, or in ways they know students learn. Rather they are teaching the way they were taught, using the same type books, workbooks, and teaching techniques which were used on them. Navajo teachers would know language, custom and culture of Navajo students better than would non-Navajos, but they are not able to bring that knowledge into the learning situation since they have no experience or models of a schooling situation which allow that.

We are tempted to throw up our hands. If we tend to teach the way we were taught, and if that way of teaching/learning doesn't work well, and if there are few models to watch to try to pattern ourselves after, what can we do? We can adapt. We can learn; there is hope. In the same manner that we can learn from any situation, we can learn to teach in different styles. It will be difficult, particularly since we don't have many models of alternative teaching practices to follow, but it can be done.

We have to be flexible. We have to realize that we really don't know many of the answers to the questions we will have in the classroom, let alone the questions students will have. We will learn that it is OK not to know. Sometimes we will teach incorrectly, either with wrong facts or wrong approaches. We have to be able to deal with that and correct our mistakes as we discover them. The classroom is a miniature real-life situation, for us and for the students. We will make mistakes. We can correct our mistakes. We can help each other to get from where we are to where we can go. This attitude is important for success with Native American students. The teacher who has to be "the authority" will surely make a mistake some time and end up losing face and/or respect. The teacher who can assume the role of facilitator, letting students discover knowledge, has a much more tenable, and valuable, position.

McDermott and Aron (1978) are concerned with the teacher's role in student success in the classroom. They indicate that we must realize the prejudices and values which we bring to the teaching situation. They also indicate that we need to focus on the abilities of our students rather than trying to sort children into those who can make it and those who cannot. "We must de-emphasize the consequences of not achieving in the prescribed manner. The learning process, which may be very difficult to measure and sort, must be affirmed even, if necessary, at the expense of an easily sortable product." (p. 51)

As teachers, we have often had more schooling than the parents and relatives of our students. We need to realize that schooling and knowledge are not the same. Some would equate schooling with "seat time," while knowledge is related to wisdom. Native American parents are getting more schooling, but they have the wisdom from their culture. The grandparents have even less schooling, but even more wisdom. As teachers, we would be wise to actively encourage our students to tap into the wisdom they can easily find in their extended families. Their integration of that wisdom with schooling will enable them to succeed in whatever they decide to do after schooling ends.

We have to be open to Native American cultures and the associated ways of thinking or doing things. In our classroom demeanor, we cannot allow students to get the impression that the "school way," or the "Anglo way," or the "American way" is any better than any other way of thinking or doing. Each way is different and came from a different approach, from different values. Each is appropriate in its setting and useful if applied correctly. Native American students are forced to be multicultural, even on their reservations. A multicultural approach to their education will serve them much better than a culturally isolationist approach, even one which uses only their own traditional culture. As teachers, we are much more familiar with the mainstream "American" approach to education and thinking. We have to become comfortable with the ways of our students and study the ways of other cultures if we are to prepare our students for the world they will enter.

Teachers who are teaching mathematics or reading or science to children may do very well in mainstream, mono-cultural settings. However, in the multicultural setting of Native American education, we are teaching children first and happen to be using mathematics, reading or science. The emphasis is different, and we have to deal with the world of the student first. The subject matter becomes less important and the learning the student does becomes more important. The classroom atmosphere is a little different. For Native American students, the teacher listens more, even when there is little talking. The teacher's role is to validate students, to take what the students know and build upon it. The subject matter is only a vehicle. Cummins (1986) expands this important concept nicely.

Leap (1993) cautions us to be careful of even such seemingly rigid things as the written English of Native American students. He shows that the items which are easily marked as mistakes in correct grammar are often natural, important, and culturally appropriate ways for Native American students to communicate. Their place, distance, feelings and relationships are often displayed through their use of written English. If we correct their efforts at culturally appropriate communication, we are forcing them to forsake their heritage in favor of ours. Leap's analysis of student writing in this article is very insightful and can be used by all of us. He greatly expands our awareness of Native American student writing in his book, American Indian English (1993). McLaughlin (1992) provides additional analysis of Navajo English writing from school and community situations throughout his book.

We can't try to change everything at once. If an idea of a procedure works, we should keep it. If something doesn't work, we can change it. If the change works, we can keep that and move on. If the change doesn't work, we will have to change again. In short, if it works, keep it. If it doesn't work, change it. It sounds simple, but it is harder than we think.

Stranger in a Strange Land

Native Americans, when they enter the schooling system, either on or off the reservation, are entering a culture that is strange to them. The language, conventions and values are completely different, not even having a common base. The dominant American culture, from which the schools are derived and for which they prepare students, generally has a common European basis, with a Romance and/or German/Saxon language base. The laws of the culture are derived from English common law of the 1700's, and customs are mostly European. Admittedly, this oversimplification leaves out the Oriental component of our culture, but the system of "schooling" mostly leaves out Oriental thought processes and values as well.

Native American students entering a system that has been designed for another culture have to feel insecure, at best. There is little commonality from which to know how to act.

In the same manner, non-Native (or members of a different tribe) teachers of Native American students are entering an equally strange world. We are trying to understand the thinking process, the decision-making process, the personal interaction process, the values, the language practices, and the customs of a culture that have no common basis with our own. We are in new territory, mostly without a guide. There has been a lot written about the various Native American cultures, which will be of some help. However, in spite of the documented lack of success in providing education for Native Americans, there has only recently been research done on possible reasons for these failures. And even with this research data, there has been even less change in the educational process used for Native Americans to try to improve the success rate. As teachers trying to understand the Native American students, and trying to do a better job of fostering learning in them, we will have to be almost as explorers on new ground. There will have to be much experimentation, a lot of risk, and a sincere attitude of not knowing all the answers. We, and to some extent the students, will have to become researchers, learning how to increase learning.

A good working knowledge of the child and adolescent maturational process will help us. We usually have studied these in educational psychology classes in school. It will be a good idea to dust off those concepts, but at the same time to look at the culture of the children to see if those ideas we learned in college are applicable to our students. Some research has been done on a theory of cognitive and personality development of Navajo children that differs from the theories of Piaget, Erickson, Havighurst and Kohlberg (Rough Rock, 1982). As we watch our students and talk to our peers, we will find that some of what we have learned in our teacher training will work fine, but some will have to be modified.

Plank (1993) found that for teachers on reservation schools, the cultural, social and physical isolation was a serious factor, causing many teachers to leave after only a year or less in some cases. He also found lack of administrative support and lack of orientation to be serious factors. Finally, he found that student progress in terms of standard "system" expectations of achievement was discouraging to many teachers. If we plan to teach on the reservation, we need to be prepared for these factors. If we are teaching off-reservation, the factors still will exist to some extent for our Native American students.

A Role for the Teacher

In this new, more appropriate schooling possibility, we will be role models for the students. We can't be authoritarian, since we really don't know all of the answers or what will work all the time. We have to work with the students rather than tell the students what to do. Some of us, because of our experiences, our training and our personalities, have a difficult time assuming this role.

We can assist, encourage, cajole, guide, coach, compliment, facilitate, befriend, mediate, and learn. However, we should always be cautious to keep the interaction between ourselves and the students on a positive note. Even when we are correcting a project or a paper or a test, we are fostering learning. We need to concentrate on what is correct rather than focusing on what is incorrect. We need to work from student strengths rather than having the students see mostly their "failures." Instead of "trial and error," Native American students need "trial and success."

Kleinfeld (1972) shows that the successful teacher for Indian and Eskimo students has personal warmth, is actively demanding, and is supportive. McNeley

(1991), though talking about higher education, adds areas of personal warmth and use of small groups. Much of what he advocates is pertinent to all levels of Native American education.

We are also role models for students as well as some community members. We have to live up to that responsibility. The students and the community will be watching to see how our words match our actions. If we want students to be nice to each other, we have to be nice to them and to our colleagues. We can't tell others to do it, we have to demonstrate the actions ourselves. Instead of telling students to pick up papers in the classroom or on the school grounds, we have to pick up those papers as we walk to and from school. We have to keep the classroom and our desks organized if we want students to try to keep their environments clean. If we expect honesty on the part of our students, we have to demonstrate that trait to them, to our peers, and to our supervisors. This is a difficult task, being a role model, but Native American students are extremely observant. They will know if what you are asking of them is just words or if it reflects values you feel are important.

Like it or not, we who are teachers have the potential of being leaders in the Native American communities. Through our efforts with children and by being role models, we can help shape the destinies of families, villages, and maybe even tribes. Notice, though, that leaders in Native American communities take on that role through the words of others. The American concept of a leader is one who declares himself such. Where Anglo leaders talk about their abilities and their willingness to lead others, the Native American leader is simply a role model, going about his/her activities in a normal manner. Others then notice and ask for opinions and leadership. When we assume the role model attitude in the classroom, we will become leaders, in a sense, for our students, for peers, and for community members. Living up to that responsibility is demanding.

We will also need to become a part of the students' community. Native American students learn best from those they know and respect. Deyhle (1983) found that young Navajo students learned and performed well on tests because the teacher wanted them to perform well. Older students are responsive more to their peers in this way. If the peers respect learning and the classroom situation, most individuals will respond. If the peers have little respect for schooling, motivation and discipline problems will be high. That peer perception can be changed, if necessary, by making the schooling situation more appropriate for students, as they see it. A teacher of Native American students has to be willing to make this extra effort.

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Chapter 14 Main Ideas

We tend to teach the way we were taught.

With effort, we can learn different ways.

Teachers need to be learners.

Be more of a model for your students and less of a source of all information.

Chapter 15

The Community is the School

Some First Steps toward Community Involvement

This chapter could have been grouped in the section of "What Works" in the book. It is left in this section of "From Whom Students Learn" in order to emphasize that the school is only a part of the learning environment of schools.

Community involvement in schools is hard enough when the community basically supports the school. In an environment where the community and the school have different agendas, different value systems, and are working often at counter purposes, the relationship is even more difficult. Following are some ideas which proved effective at Hotevilla-Bacavi Community School on the Hopi Reservation in Northern Arizona.

On Hopi, as on the Navajo and some other Native American Reservations, formal education has come recently and painfully. As recently as two generations ago, children were forcibly taken from their homes by armed military personnel (Clemmer, p. 56; Page, p. 161; James, p. 112), taken to boarding schools far from their homes (Emerson, p. 659), and forced to stay at these schools for many years without returning to their families (Breunig, p. 60). The acknowledged agenda of the schools was to change Native American culture by changing the children (Eder & Reyhner, p. 31; Breunig, pp 57-62). The children were not allowed to respect the ways of their parents, but were taught the values of the dominant culture so as to be made less of a problem to the government. That plan was certainly less than successful, leaving a very negative feeling about schools in the minds of many Native American adults. There was a time when the parents actively refused to send their children to school and were sent to jails for that refusal

(Whiteley, p. 78). Currently the resistance is less obvious but it is still an important factor in contemporary classroom situations. One study (TCI, p. 28) shows that on Navajo, about 22% of students do not show up for school at the kindergarten or first grade level. That study also indicates that 62% of Navajo students do not graduate from high school (p. 28). Many parents do not trust the school and want little to do with it, though they will now allow their children to attend. While community involvement in schools is improving, particularly under policies of community control of schools, there still is a reluctance to integrate schooling with local needs or values.

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McLaughlin (1993) provides narratives of Navajo parents and teachers, and insightful analysis, from a community on the northern Navajo Reservation. His perception will help schools and teachers develop school-community relations. Following are examples drawn from a school on Hopi. As in the McLaughlin article, Hotevilla school was looking at the problems of the interface between school and community.

Under the leadership of Vernon Masayesva, a Hopi principal from Hotevilla (later tribal chairman), Hotevilla Day School became "Hotevilla-Bacavi Community School" (HBCS) by contracting with the controlling Bureau of Indian Affairs for local control of the educational program. The local school board and the parents had little experience with the real purpose of schools. They believed that the schools were to prepare their children to enter the world off the reservation, the world of work, the world of the dominant society. They did not have any idea that a school could serve other purposes. The staff (mostly non-Native American) also did not have experience with a Hopi educational concept. The school was in a situation where the parents expected what they had experienced under early BIA schools and we teachers were experienced in providing the traditional educational model, so change would be difficult.

HBCS began by encouraging parents to come to the school (realizing that this would go largely unheeded in the beginning). The principal had the coffee pot on and an open door policy. As expected, few parents showed up. We were also encouraged to become more active in village affairs, expected to attend ceremonial activities and to make home visits. Parents were at first uncomfortable with our non-Native American presence in their homes, but soon became less fearful. After all, the purpose of the visits was for the betterment of their children. Soon, we recognized each other in the store or on the street and spoke to each other. The teacher aides and other Hopi staff were encouraged to be mentors for the non-Native American staff, assisting them with customs and curriculum.

Instructionally, we were asked to assume a new role. We were encouraged to develop research abilities in our students, but by asking questions which the students would have to take home for answers. For example, students were to develop a timeline of local history. Local history was available in books only until 1907, so the students had to find out about later developments by asking parents and other relatives. We could not challenge the information students brought in since we did not know the answers. When students brought in conflicting dates or data, they had to work out the differences by compromise or further research. Communication was increased between generations, parents were brought into the educational process, and in the classroom we became guides rather than authorities. Of course the parents questioned the process, but they did come into the school to view the village timeline which took up about 30 feet of the main hallway.

Another project was to develop family trees, based on blood relationships and marriage, for four generations. Again, the students could find out, but we did not know. In the small villages served by the school, all students and Hopi staff of the school were able to be fit onto three large family trees. These were again displayed on large charts in the hallways and drew considerable attention from students, school personnel, and parents.

These two projects alone 1) helped to increase communication between students and parents, 2) showed parents that their input into school activities was not only wanted but needed, 3) showed students that their parents' knowledge was valuable, 4) required teachers to assume a new role of facilitator rather than authority, and 5) began to let the school reflect aspects of the community.

At a philosophical level, schools exist for the purpose of preparing students to enter adult life. That adult life will likely reflect the community surrounding the school, so the school needs to incorporate aspects of local values, needs, history, and such into its fabric.

Of course, these few projects indicate only a part of the continuous efforts at the school. Teacher training continued into new ideas and ways of teaching, Hopi culture and learning styles, and appropriate curriculum materials and methods. The school was opened in the evenings for library use, community arts classes, and basketball. Village groups were encouraged to use the school facilities for their needs, with advance arrangements necessary, of course, and a fee charged if appropriate. We were encouraged to make home visits more than once a year both to take positive news about students and to seek assistance with student problems. More local field trips were scheduled, most often with community guides to provide expertise.

The school support staff was not left out either. We realized that the cooks, janitors, bus drivers, secretaries, teacher aides, and other support staff were actually community members who were already integrated into both community and school. They were also the most obvious role models for the students. We were able to utilize their expertise in several ways. First, we asked them to assist in developing pertinent, culturally appropriate curriculum materials for use with students. Their input was invaluable, and they were also able to refer us to other community members for additional help, or even better, go themselves to other resource people in the community. Secondly, we asked them to assist in the instructional process, working directly with students. Cooks taught cooking and other home economics areas; janitors and bus drivers taught mechanics, construction and other vocational skills; secretaries and bookkeepers taught typing and other office skills. Everyone at the school, without exception, became involved in the teaching/learning task. Professional teachers assisted paraprofessionals and non-teachers in development of their teaching activities and acted as supervisors or resources. The non-teachers were not afraid to ask for help when they needed it since they were obviously being asked to do things they had no training to do. Actually, we found out, their experience as parents, aunts, and uncles, provided a great background for their teaching efforts.

In a time frame of about two years, dramatic improvements were seen at Hotevilla Bacavi Community School. Parents were seen more often around the school, at lunch, in the hallways, in classrooms. Student attitude improved, attendance increased, vandalism decreased. We became more willing to try new things and were continually questioning conventions, methodology, curriculum. Faculty began developing more of their own ideas, utilizing the teacher aides more and bringing in more local resources. The curriculum became more activity-based. We began to look for new materials and methods. Mathematics manipulatives were used much more, and student success in math increased as measured by standardized tests and teacher evaluations. Science and mathematics were combined in most classes to provide for overlap of concepts and a more active approach to both subjects, with local field trips for geology, biology, and other areas. Communication arts and social studies were combined in at least some classes to integrate concepts and allow for local values and input. Efforts were made to integrate curriculum under broad headings of 1) structure and function, 2) cause and effect, 3) the same and different, and 4) patterns. (These headings were taken from the social studies curriculum—Man: A Course of Study, which was used in fifth grade.) The headings were incorporated in all subject areas from reading to the arts. Local examples were used whenever possible.

Probably the most beneficial change came as a result of changed teacher expectations. We became learners instead of authorities. It became OK not to know the answer. Students learned that there were other sources of information and that they could know more than we did in some cases. They learned that their parents had important and interesting information, sometimes more than the teacher. All learned that it was OK not to know. All learned to respect the other sources and that it was just fine, even expected, to go to those other sources at appropriate times. The walls between the school and the community got shorter. The school and the community began to work together and cooperate with each other.

Unfortunately the process developed at the school did not continue indefinitely. As the school developed new ideas and new ways of involving students and community in the educational process, it got further and further from the type of educational process that the parents and grandparents were familiar with from their own schooling. As the procedures at the school changed, they became less familiar, less comfortable to parents. The school, at this point, did not increase its community communication or education, and community unrest began to develop. Parents were concerned that their children might not be able to compete at higher educational levels. Through a change of school board members and subsequent change of board policies, the school returned to educational practices similar to those the parents had encountered when they went to school. Now that those who went to HBCS during the time described are grown and have children of their own, they are often heard to reminisce fondly about the learning experiences they had there.

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Chapter 15 Main Ideas

Parental involvement means going to the parents as well as bringing parents to the school. As school personnel interact more with parents, parents will become more involved with schooling.

The school (teachers, paraprofessionals, administrators, and staff) need to get out into the community as often as possible and in as many roles as possible.

The school needs to show that it respects the parents and the community by valuing, and having students value, the knowledge and abilities of these resources.

Learning does not take place only at school. Even school learning can take place elsewhere.

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This chapter has shown what worked at one school by combining community and school efforts to improve student responses. The following chapter outlines more ideas that have worked for others.

Chapter 16
What Works

As teachers, we are often looking for a "cookbook" of techniques that will work for us in the classroom. Administrators and school boards are likewise looking for "teacherproof," guaranteed curricula that will insure learning of the "right" materials by all of their students. Unfortunately, or perhaps fortunately, we know such a curriculum does not exist. What is presented in this chapter is a series of ideas for teachers to assist in developing techniques which are more likely to work with Native American students. These ideas depend on our professionalism and our willingness to adapt to new situations and adopt new techniques. We are hired as professionals, but most often are simply told what to do, as if we were clerks. The effective education of Native American students simply will not follow from a non-thinking approach to classroom activity.

Following are some ideas which have been shown increase teacher effectiveness with Native American students. These have been gleaned from experienced teachers and the literature and are presented to assist teachers new to Native American education.

1. We must get to know the environment our students live in. Walk around in their environment, visit their homes, meet their parents. Spend a good deal of time in their environment. The message we will give is that we care, and we do. Find out where our students read and do their homework. See what resources, (books, people and other things) are available to the student. Does s/he walk to school? Ride the bus? How long? All these things affect his/her school performance. What are his/her responsibilities at home or with other extended family? Deyhle (1983) found that young students respond well on tests if the teacher asks them to do their best. In the

home situation, students learn and respond best to adults they like and respect. If we get to know the family, the family has a chance to respond positively to us and will likely get more involved in the child's education. It is also nice when a parent recognizes us and talks to us in the grocery or at the gas station. If we do things which imply respect for the parents and family, that respect will be returned.

Parents are often afraid to participate in the schooling process of their children, feeling that they don't know anything about what is being taught at school. They do have tremendous knowledge, though, which schools often ignore. By having the child ask for information which the parents (or other extended family members) have but which we don't know, the implication is that the parents are valued in the educational process of their children. Soon cooperation develops.

2. Mix methodologies in the classroom. At home, most parents are quite busy with activities which are necessary for their basic needs. They leave much of the child-rearing to older children. This includes expecting older siblings to teach younger ones the things they need to know as they become ready. There is much more interaction between siblings and relatives than in Anglo culture. To take advantage of this natural educational situation, allow peer tutoring. Children can often learn better from one another things which we have a hard time getting them to understand. This can also include cross-grade tutoring, in which younger students learn from older ones and the older solidify their understanding of concepts by explaining them to younger children.

3. There is a strong sense of group in Native American culture. There is the family, most often extended family, the clan, the village, perhaps a religious society, and the tribe. A sense of group belonging is important and can be used both for motivation and for

discipline. Each member wants, and is expected to, live up to the level of the group. Each will contribute to the best of his/her ability, and most will be tolerant of individual differences of the group members.

Leith and Sientz (1984), studying Cree children, found that group problem-solving was the most effective teaching strategy for elementary students, while individual assignments were most effective for secondary students. Green (1978) recommends individualized, non-competitive programs to provide a supportive atmosphere for math learning. Lee Little Soldier (1989) encourages cooperative learning techniques, since one of the core values of Native Americans, he says, is cooperation and sharing. He indicates further that independence, wise decision-making and responsibility are also emphasized. Swisher (1990) also presents a strong case for cooperative learning in the classroom, citing some research studies in this area.

Cooperative learning techniques will be appropriate in most situations, but keep in mind that in some cultures there are certain relationships which allow one person to ask and expect almost anything from another certain relative. Occasionally this can result in abuse where one student ends up doing another's work. An alert teacher/facilitator can discover this rather quickly, and change groups or change the rules. Cooperative learning is a complex strategy in itself. It needs to be utilized in concert with other aspects of values and culture as presented throughout this book.

4. Use local activities and local interests whenever possible. If we firmly understand the concepts of a subject area which need to be covered in a time period, and if the students are likewise allowed to know the conceptual goals, then almost anything can be used to develop skills in any subject area. The literature to support this is vast, starting perhaps with John

Dewey's writings in the early years of this century. Art can easily be utilized to teach mathematics. (Perspective in drawing, mixing glazes for pottery, measuring temperatures for firing, scale, animation films, coordinating film action with soundtracks, etc.) Music can encourage reading. (Research on composers, reading interpretations, writing words for songs, reading text for popular songs, learning to write music, describing musical feelings to others, etc.) Science (particularly biology, but also physics and chemistry) and Physical Education can go together. Almost any combination can work. One caution, though: unless students or an individual student is particularly interested in an area s/he (or they) want to explore, it is much easier to work on things we, the teacher, are interested in. If we are interested, we can infuse the students with excitement and enthusiasm. If not, it is hard to get students excited, though they do sometimes find that enthusiasm on their own. If we have broad interests, hobbies, and other areas of experience or expertise outside of education, we will have an easier time. We should not be afraid of using our interests in the classroom. Excitement is contagious.

5. Allow time for students to process information and develop understanding before they have to try something new. Moore (1987) differentiates between "trial and error" as a process compared to "watch-then-do" or "listen-then-do," in that the latter involves learning and understanding before trying, while the former involves making a response and improving it after feedback on errors. Werner and Begishe (1968) stress that competence is a prerequisite for performance. Scollon and Scollon (1981) outline the difference between American English and Athabaskan discourse with some strong implications for schooling. They indicate that Athabaskans talk much less in new or uncomfortable situations and feel that students should learn from

adult examples rather than demonstrate proficiency to adults. Scollon and Scollon show that in Athabaskan culture, the dominant person (teacher or student instructor) does most of the talking, and the subordinant person (student) should be quiet and listen. Therefore, we need to give incubation time so that students can understand before they try.

6. Let students help with determining the subject matter of the curriculum whenever feasible. According to Fox (1990), BIA standardized test scores indicate that the greatest gains are being shown in BIA schools which are committed to a "whole language"

approach to instruction. She has indicated further that this "whole language" approach is much more effective in less acculturated Native American situations, while a more behavioral approach works with more acculturated students. Hickman (1990) shows that whole language techniques are not just for whole language, but can be used in other areas as well. Pepper (1985) indirectly supports this in observing that "many Indian students learn best by the use of analysis, symbols or images," thus trying to establish relationships between the concrete world and ideas and concepts.

7. We must know where we are going. We need to let students know where we, and they, are going. Most curriculum is full of drill, repetition, and sometimes meaningless confusion which covers what are usually only a few useful or important concepts which students need. If both we and students understand what those concepts are, we can help each other gain the skills needed to master them. Let students take an active process in getting to the goal. Wauters, et al (1989) found that kinesthetic learning was most preferred, followed by visual and tactile learning, with auditory learning last. The implication is that lecture/demonstration is the least effective teaching modality for Native American students.

8. Most Native American communities have untold material and personal resources which the schools never tap. In addition to the family resources, there are crafts people who may have skills passed on for generations, but which are no longer used much. There are often people retired from interesting on- and off-reservation jobs. There are probably some government employees who could give insight into some aspects of tribal, state, or even federal governmental activities (or bureaucracies). There are probably some trades people. There are probably numerous dead cars from many vintages, untold

aluminum cans, other sources of metals, clays, woods, grasses, natural herbs and dyes, historical artifacts (probably some religious and others not), war souvenirs, and countless other items which could provide a jumping-off point for some students.

We don't have to bring all of these resources to the school. We don't even have to be aware of all of these resources, though it would be nice. If we are allowing our students to be researchers, they will discover these opportunities. They can then search out these people or artifacts outside of the school, bringing in what is allowed and what is pertinent to others. Let the students take charge of as much of their own learning as possible. Get out of their way.

9. Do what we say and say what we do. Our reputations as reliable, straightforward and honest persons depends on keeping our word and telling things honestly. Most Native Americans are used to dealing with various components of the government such as BIA, IHS, Social Security, Welfare, state and federal retirement systems, etc. Most tribal, state and federal governmental agencies are not particularly concerned with keeping their word when they tell an individual that something will happen. They are large bureaucracies with innumerable chances for the best of plans to go astray. What people see, though, is that these agencies, which are perceived as a part of the Anglo "system," do not do what they say. We, as Anglo teachers in a school, are also perceived as part of an Anglo system. Therefore, it is likely that we will initially be categorized along with those who do not keep their word and who are not to be trusted. We can change this impression by our actions, over time. It will also help if we truly listen to people, both students and community members, and try to work with them to accomplish things they think important.

Be a good role model.

10. The rapport we develop with our students and with the community will be invaluable. Kleinfeld, et al (1983) found rapport, concern and empathy to be by far the highest criterion of successful teachers in rural Alaska communities. Pepper (1985) suggests meeting the class with equality and mutual respect. He also states that students need to perceive us as caring, fair, courteous, friendly, and trustworthy with no ulterior motives. The cool aloofness which is the stereotype of college professors, and therefore the model for teachers, is simply not appropriate to enhance learning in Native Americans. Teachers who are knowledgeable about and caring for their students in an individual and personal manner, and who demand excellence from their students, will tend to be more successful.

11. Don't waste students' time. Asking students to do busy work or tasks that do not lead toward a goal will rapidly lead to disinterest, boredom, and discipline problems. Time is all we have with students. Make it quality time. That means things have to be meaningful in the students' perception. Parents, fellow teachers, administrators and support staff deserve the same courtesy. Don't waste their time. If a meeting is not needed, don't have it. Keep meetings and encounters short, but not abrupt. There is a courtesy needed in any interaction, and probably a bit more needed in those between cultures, but respect that the other person probably has other things on their agenda as well (students too).

12. Use humor. Let students use humor. Keep things light and mostly fun. A positive attitude will go a long way.

13. Work from student strengths. Find what students can do and use that as the beginning place for expansion. Most tests reveal both strengths and weak-

nesses, but interpretations of test results are mostly centered around the weaknesses and taking remedial action to improve scores. This results in a lot of negative feedback to students, a "trial and error" type of situation. This can be easily turned around by using the strengths to expand into areas which need improvement. Much more positive reinforcement will be used, resulting in a "trial and success" situation.

Mark what is correct on student papers. Put the focus on success. Marking errors puts the focus on failures.

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14. Expect excellence from students and from ourselves. The single element which all successful programs for Native American students have in common is high expectations. Don't accept sloppy efforts. In the same manner, provide a role model which doesn't produce sloppy efforts.

15. Watch more, ask less. In Native American culture, things come when it is time, when we are ready. We will learn mostly by watching and thinking. Asking shows that we really are not a part of things and are not quite ready. Hall (1989) is concerned that the differences in implied context content of a language causes misunderstandings between cultures. It is a little like a fraternity or sorority. If we have to ask what the secret handshake is, we obviously don't belong, so nobody will give us an answer to our question.

Also, most Native American cultures have been poked, prodded, observed, and questioned endlessly by anthropologists over the last century, with the results (often incorrect results) being published in books or someone's dissertation. This doesn't mean we should avoid asking questions of students to lead them in their learning process. It means our own learning will progress mostly by observation.

There are, though, some issues of Native American cultural awareness for which we do need an opportunity to ask questions. For that, we need to find someone we can use as a mentor. We will need to work out an agreement that we will ask them most of our "dumb questions" of them in order that we can get some assistance for things we just can't figure out. Our mentor will need to realize that it is OK for them to tell us that they don't know the information we need, or that they can't tell us the answer for one reason or another. If the mentorship works as it should, we will get some answers, but will also develop an awareness and respect for things we should not get into for the present and appreciation for the sensitivity of our mentor. It will also provide a special relationship which should help us and the mentor to better understand the multicultural situation we are in.

16. Be a researcher. Study people. Study students. Find things that work and things that don't work. Keep those that do, change those that don't. Try things. Get students to try things. Let them research as well. Find new ways.

17. Have fun. If we are having fun, the students might. If we are not, the students won't.

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Robert W. Rhodes began teaching on the Hopi Reservation in 1971 and received his Doctorate in Education in 1973. In addition to serving as a teacher of students from preschool through graduate school, researcher and administrator, Dr. Rhodes has provided training on various aspects of Native American Education.

This book is for teachers of Native American students who are looking for new, different, more successful ways of fostering learning. The ideas from this book, combined with the insight of the teacher, will help provide an energetic, exciting learning situation. While most examples are taken from reservation settings, the concepts apply equally to off-reservation schools with smaller percentages of Native American students.

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